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ABSTRACT

Preceded by preteleconference activities, this teleconference examines the definitions, history, assumptions, and consequences of tracking as well as barriers to change, restructuring responses to literacy and learning difficulties, effective alternatives to tracking, and specific grouping strategies. The following documents are included: "Keeping Track Part 1: The Policy and Practice of Curriculum Inequality" and "Keeping Track, Part 2: Curriculum Inequality and School Reform" (Jeannie Oakes); "Access to Knowledge: Breaking Down School Barriers to Learning" (Pamela Keating and Jeannie Oakes); "Shattered Hopes" (Richard L. Allington); "Teacher Beliefs Toward Academically at Risk Students in Urban Schools" and "Do Chapter 1 Programs Promote Educational Equity?" (Linda Winfield); "Ability Grouping and Its Alternatives: Must We Track?" and "Using Team Learning" (Robert E. Slavin); and "Research Identifies Effective Programs for Students at Risk of School Failure" (Center for Research on Elementary and Secondary Schools). Post-teleconference activities follow as well as supplementary readings that include: "Revised Chapter 1 Opens Options for Schoolwide Plans" (James H. Lytle); "How Special Should the Special Education Curriculum Be?" (John O'Neil); and "Assuring School Success for Students at Risk" and "Children at Risk: Work of the States" (Council of Chief State School Officers). (CLA)

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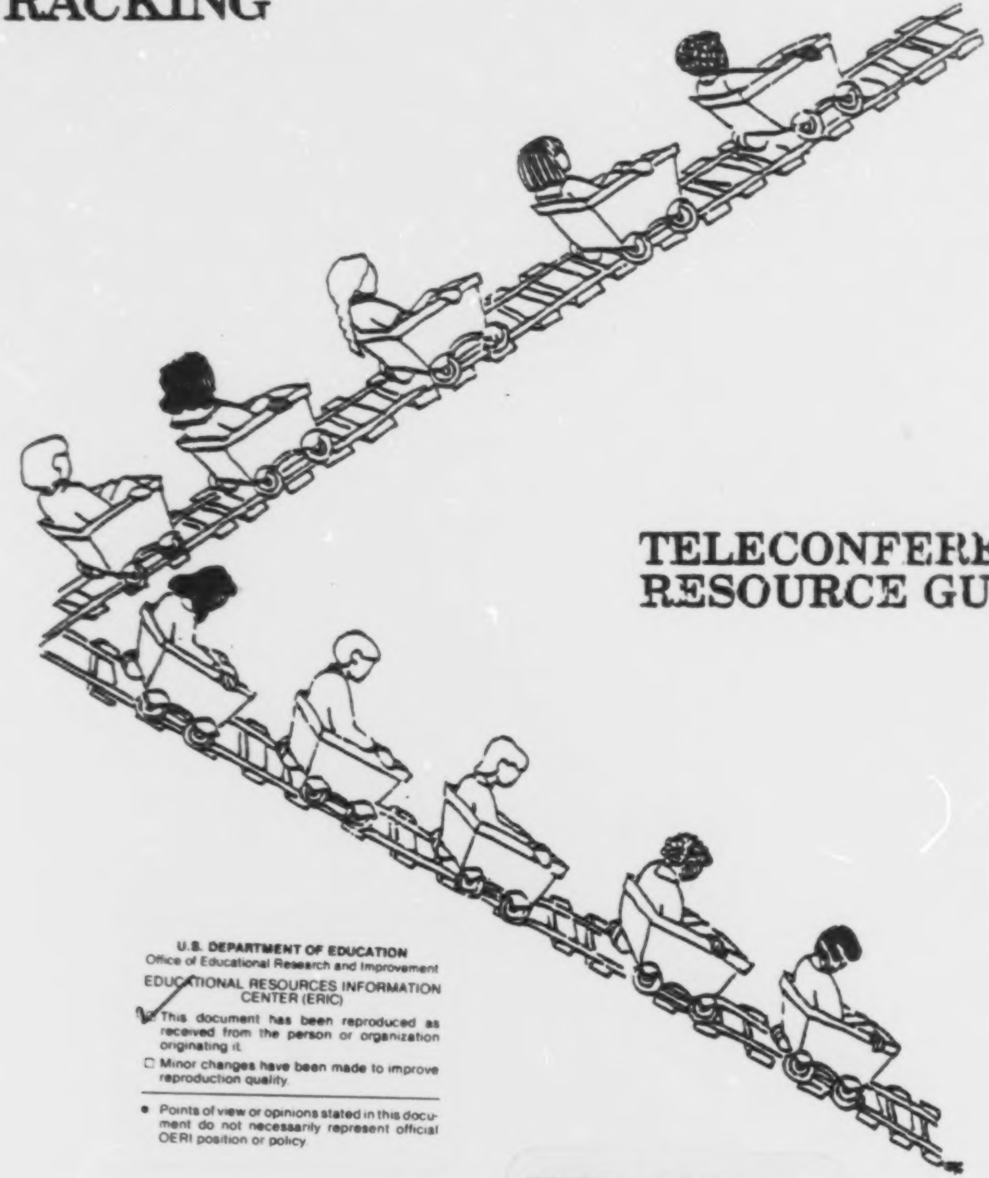

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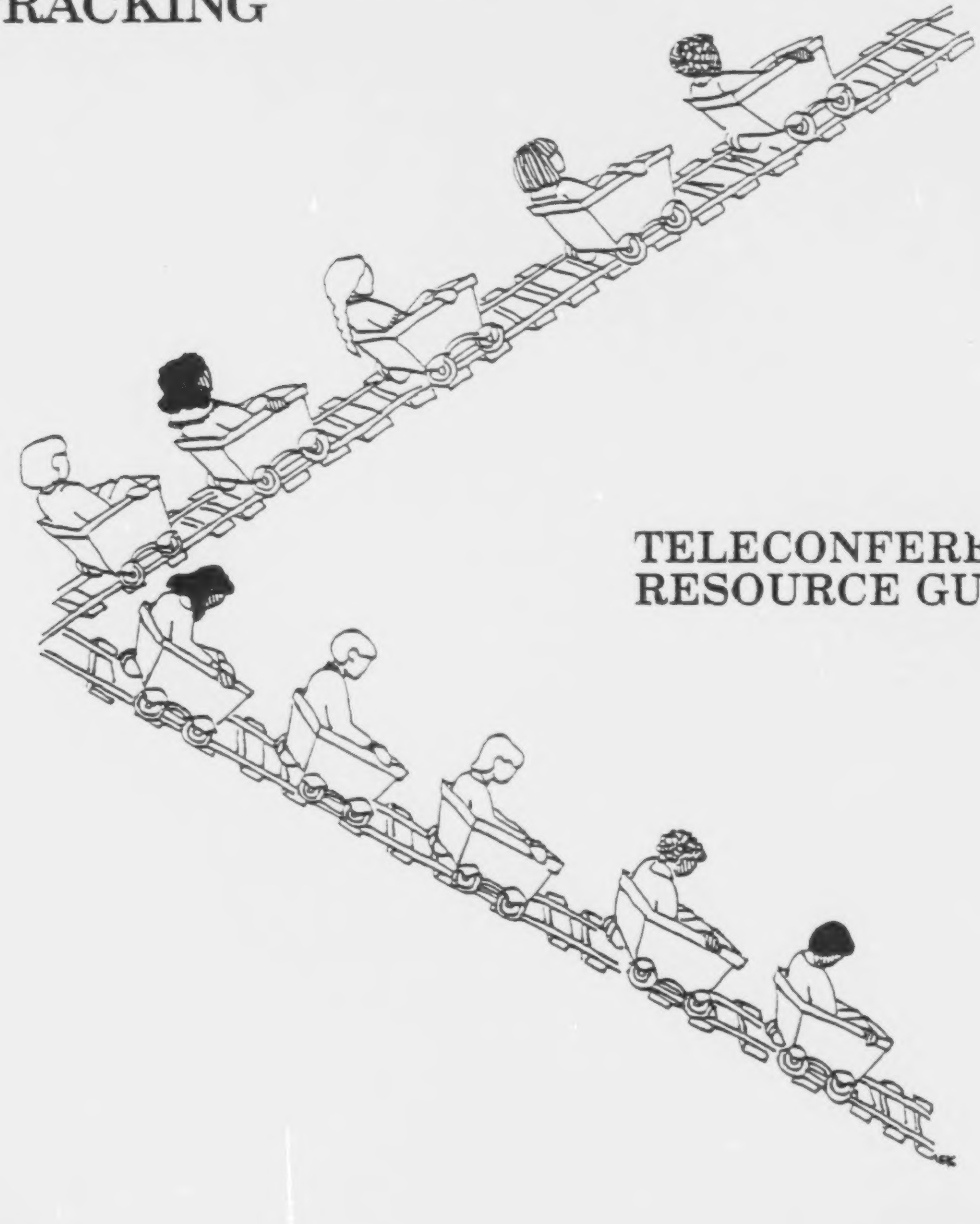

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Managing Instruction for Equity and Excellence Resource Guide

A National Video Teleconference

Presented by the:

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and the

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January 31, 1989

Beau Fly Jones

Editor

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PRE-TELECONFERENCE ACTIVITIES

The activities in this section are to be conducted before the teleconference, time permitting.

ACTIVITY 1 (Individual)

Pre-Teleconference Questions

ACTIVITY 2 (Group)

Segment 2(a) Describing a Low-Achieving Student

Segment 2(b) Considering Alternatives to Ability Grouping

ACTIVITY 3 (Individual)

Segment 1 Key Definitions and Beliefs

Segment 2 Key Definitiions

Segment 3 Key Definitions

8

ACTIVITY 1

Pre-Teleconference Questions

Please take a few moments to answer the following questions. Think about the statements and indicate to what degree you agree or disagree with them. Put an (x) in the space that reflects your answer. The questions are designed to help you focus on some of the issues of the teleconference.

	Agree Very strongly	Agree Strongly	Agree	Disagree	Disagree Strongly	Disagree Very Strongly
	()	()	()	()	()	()
1. In American education, all youngsters are taught basically the same things.	()	()	()	()	()	()
2. There are individual differences in the capacity for learning.	()	()	()	()	()	()
3. In American schools, there are different achievement patterns for different groups of students.	()	()	()	()	()	()
4. Low-track students learn small things better than they learn large things.	()	()	()	()	()	()
5. Skills are developed in sequence, from lower-order to higher-order thinking skills.	()	()	()	()	()	()
6. Skills must be mastered before context--i.e., learn the vocabulary before reading a story.	()	()	()	()	()	()
7. Students of varying ablilities learn best in homogeneous groups.	()	()	()	()	()	()
8. Students with lower abilities will be shielded from unfair competition if they are placed in a group consisting only of similar students.	()	()	()	()	()	()
9. Assessment techniques fairly and accurately reflect both ability and achievement.	()	()	()	()	()	()
10. Teachers can teach homogeneous groups more efficiently.	()	()	()	()	()	()
11. Individual learning differences mean we need to have different curricula for different students.	()	()	()	()	()	()
12. Smart students do well in school.	()	()	()	()	()	()
13. Teachers of high-track students expect more of their students than do low-track teachers.	()	()	()	()	()	()

Reflection Questions

Take a moment to think about the following questions. Feel free to write down your thoughts in the space provided.

IN YOUR SCHOOL:

Describe how your school "ability groups" students.

On what basis are students placed in ability groups?

Why are students grouped for ability?

ACTIVITY 2

Responses to Problem Situations

Please take a few moments to consider your responses to the following situations. You may wish to discuss these situations with the person sitting next to you. This activity is designed to help you focus on some of the issues of the teleconference.

Activity 2(a) Describing a Low-Achieving Student

Think of a low-achieving student in your classroom or school currently experiencing reading failure. Write down five words to describe this individual.

Activity 2(b) Considering Alternatives to Ability Grouping

List and discuss means of meeting the needs of a diverse student body without making one overall assignment to a high-, middle-, or low-ability class. Later, you may wish to compare your list to the strategies discussed in the video segment.

ACTIVITY 3(A)

SEGMENT 1

These are definitions of key terms and contrasting beliefs for Segment 1 by Jeannie Oakes. If you are familiar with these terms and beliefs, this listing will serve as a reference. If you are not familiar with them, you may wish to take a few moments to read through them carefully.

Key Definitions

1. **Tracking** - The practice of dividing students into separate classes for high-, average-, and low-achievers, it lays out different curriculum paths for students headed for college and those who are bound directly for the workplace

2. **Curriculum Tracks** - Sequences of courses for college-preparatory, vocational, or general track students

3. **Ability Grouping** - The division of academic subjects (e.g., English, mathematics, science and social studies) into classes geared to different "levels" for students of different abilities

Turn-of-the-Century Beliefs Still Driving Practice

1. **Group Differences** - A belief in the intractable differences between population groups, including the belief in substantial differences in students' potential for school learning

2. **(Traditional) Purposes of Schooling** - A belief that secondary schooling should prepare or certify some students for further education (those deemed "of best intelligence") while readying others for work (those considered "deficient and mediocre")

3. **Democratic Education** - A belief that extending secondary schooling to all requires tailoring educational opportunities to accommodate differences in ability and future life work

Beliefs Underlying Tracking Reform

1. **Promotion of Heterogeneity** - A contemporary, research-based belief that nearly all students can learn as well in heterogeneous groups as in tracked classrooms and that students identified as average or below average often do better in heterogeneous settings

2. **Reconstruction of the Curriculum** - A belief that a concept-based, thematically-organized curriculum that is well-suited to diverse groups of students is the curriculum to be preferred in all settings

3. **Restructuring of Classroom Instruction** - The belief that making changes in the task and reward structures of classrooms, in student interaction, and in evaluation process can greatly facilitate learning in heterogeneous classrooms and that there are specific strategies for making these changes (such as cooperative learning)

4. **Going Beyond Technology** - A belief that tracking reform will require not only the application of altered technologies, but also dramatically altered assumptions about students, about learning, and about the purpose of schooling

ACTIVITY 3(B)

SEGMENT 2

Key Definitions

These are definitions of key terms for Segment 2 by Richard Allington and Linda Winfield. If you are familiar with these terms, this listing will serve as a reference. If you are not familiar with them, you may wish to take a few moments to read through them carefully.

1. **Chapter I (formerly Title I)** - Established in 1965 under the ESEA (Elementary & Secondary Education Act) which provided funds to local school districts serving economically "disadvantaged" children - This program, designed to promote educatinal equity (Winfield, 1986) and designed to break the "cycle of poverty," can be more appropriately considered as a program for redistribution of funds to school districts. (See R.E. Slavin, 1987 and M. Kennedy, B. Birman, & R. Demaline, 1986 for evidence regarding the effectiveness).

2. **Pull-Out Program** - Dominant method for providing remedial services - Students are taken out of regular classroom instruction to receive basic skills instruction, for example, from a teacher funded through Chapter I funds.

3. **Equity** - The opportunity for all students to advance to the next level of schooling (Edmonds, 1981) - Equity can be considered in terms of access, participation, and student outcomes.

4. **Core Curriculum** - Basic reading instruction offered to a general group of students; to be distinguished from support or remedial instruction offered to subgroups of students (Allington, 1988)

5. **Congruence (Coherence) Model** - A framework for remediating reading skills which emphasizes additional instructional time and planned arrays of literacy lessons that offer interrelated academic tasks (Allington & Johnston, 1989; Johnston, Allington, & Afflerbach; 1985)

6. **Client-or Student-Centered Service Delivery** - The condition that results from coordination within the school building of all extra personnel involved with reading to reinforce classroom reading instruction (Venezky & Winfield, 1979) - Congruence (coherence) in the curriculum is a prerequisite for attaining this condition.

7. **Profession-Centered Delivery of Services** - The condition that results when each professional (e.g., reading specialist, resource room, Chapter I teacher, school psychologist, etc.) maintains his or her separate professional identity and provides separate and unrelated instruction, materials, and assessment of student reading, rather than merging into a coordinated, student-centered plan (Venezky & Winfield, 1979) - This condition results in planned fragmentation

8. **Planned Fragmentation** - This condition in schools reflects the status of curricular materials and instruction for reading, spelling, language arts, social studies which presents unrelated "chunks" of information with little or no attempt at integration. This situation makes learning and instruction more difficult, particularly for low-achieving students (Allington, 1989).

9. **Building-Wide Efficiency in Reading Instruction** - Relates to utilization of instructional resources (e.g., time, personnel, materials) to achieve maximal student outcomes - The instructional variables that related most directly to this condition in successful schools were adaptability and consistency of instruction (Venezky & Winfield, 1979; Chen, Winfield, & Shiloah, 1983; Winfield, 1986b). Adaptability of instruction is the degree to which each student is receiving instruction that he or she needs and often depends on the range of liabilities that teachers must accommodate in the classroom, monitoring of student progress, and availability and coordination of extra personnel. Consistency depends upon the stability of the reading program (how often programs are changed) and compatibility across grades (and schools).

10. **Opportunity to Learn** - The provision of adequate and timely instruction of specific content and skills within the classroom or in supplementary programs - This construct might be measured by obtaining teacher estimates of time spent reviewing, practicing, or applying a particular concept or by the amount and depth of content covered with particular groups of students (Winfield, 1987).

11. **Belief System (of Teachers)** - A possible influence, along with expectations, on instruction and student achievement - Personal belief systems are influenced by prior experience with diverse students, teachers' role definition, knowledge or appropriate strategies and techniques, and support services available (Winfield, 1986).

12. **Public Law 94-142** - "Education for All Handicapped Children Act" - Federal law passed in 1975 to insure an appropriate education for all children, particularly those with diverse learning problems and disabilities

13. **Second System** - The special education system which on any given day serves 4.5 million students with diverse learning problems and disabilities, most of them being relatively minor problems (Wang, Reynolds, & Walberg, 1988)

14. **Regular Education Initiative** - A growing movement to design and implement policies to merge regular, remedial and special education (for the 2/3 mildly handicapped) into a coherent system of instructional support. (McGill-Franzen 1987, Wang, et al., 1988; Will, 1986)

SEGMENT 3

Key Definitions

These are definitions of key terms for Segment 3 by Robert Slavin and Barbara Bennett. If you are familiar with these terms, this listing will serve as a reference. If you are not familiar with them, you may wish to take a few moments to read through them carefully.

1. **Ability Grouping** - All forms of school or classroom organization which attempts to reduce the range of abilities or performance labels within a class or instructional group

2. **Ability-Grouped Class Assignment** - Assigning students to a self-contained class or track according to general ability or performance level

3. **Joplin Plan** - Grouping students for reading according to reading level but regardless of age

4. **Within-Class Ability Grouping** - Grouping students within classes according to performance in a particular subject (e.g. reading groups, math groups)

5. **Continuous Progress** - Programs in which students proceed through a hierarchical curriculum at their own pace, involving grouping according to special needs within and/or across class lines - For example, all third, fourth, and fifth graders ready for instruction on decimals might be grouped together for this unit.

6. **Cooperative Learning** - Instructional methods in which students work in small, mixed-ability groups or teams to help one another learn

7. **Preventative Tutoring** - Programs which seek to reduce or eliminate the need for ability grouping by tutoring students (usually in reading) early in their elementary careers

8. **Success for All** - A comprehensive, school-wide program which uses Preventative Tutoring, Joplin Plan, Cooperative Learning, and other strategies to ensure that all students succeed in basic skills in pre-elementary grades

Segment 1

TRACKING: ITS HISTORY AND EFFECTS

Jeannie Oakes

Outline
Trajectory Graphic
Visuals
Readings

FOR NOTE TAKING

OAKES OUTLINE

Tracking: Its History and Effects

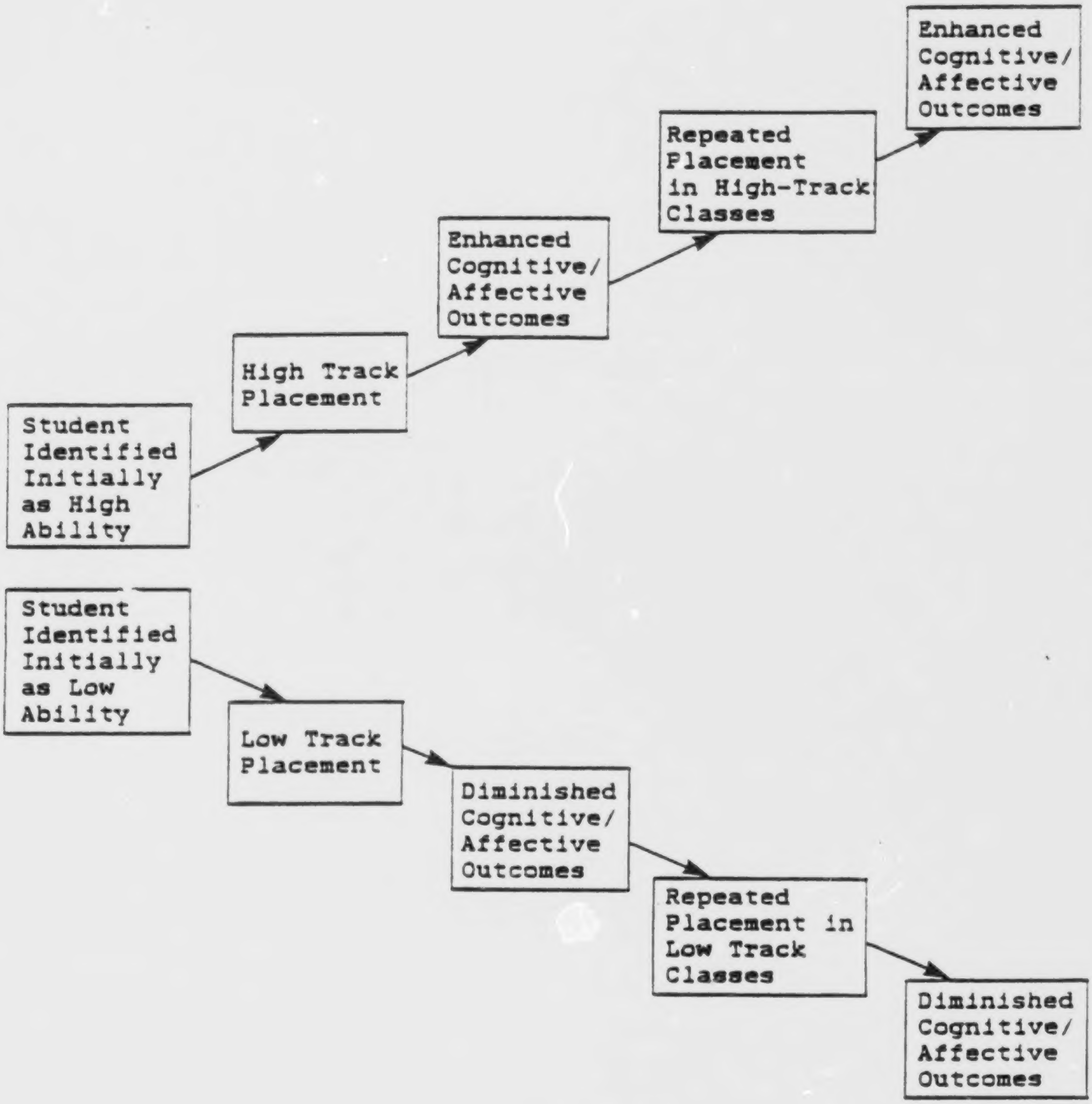
Definitions of Tracking

History of Tracking

Assumptions/Consequences

Tracking Outcomes

Barriers to Change


Student Identified Initially as High Ability
High Track Placement
Enhanced Cognitive/ Affective Outcomes
Repeated Placement in High-Track Classes
Enhanced Cognitive/ Affective Outcomes
Student Identified Initially as Low Ability
Low Track Placement
Diminished Cognitive/ Affective Outcomes
Repeated Placement in Low Track Classes
Diminished Cognitive/ Affective Outcomes

Trajectory Graphic

The Consequences of the Tracking Cycle

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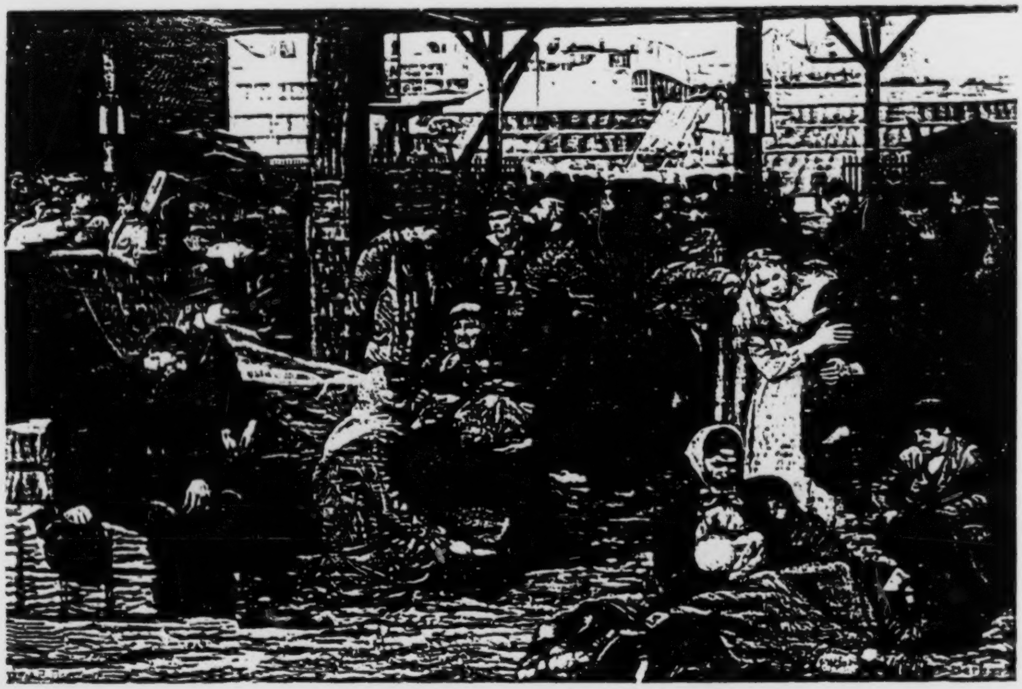
VISUAL #1



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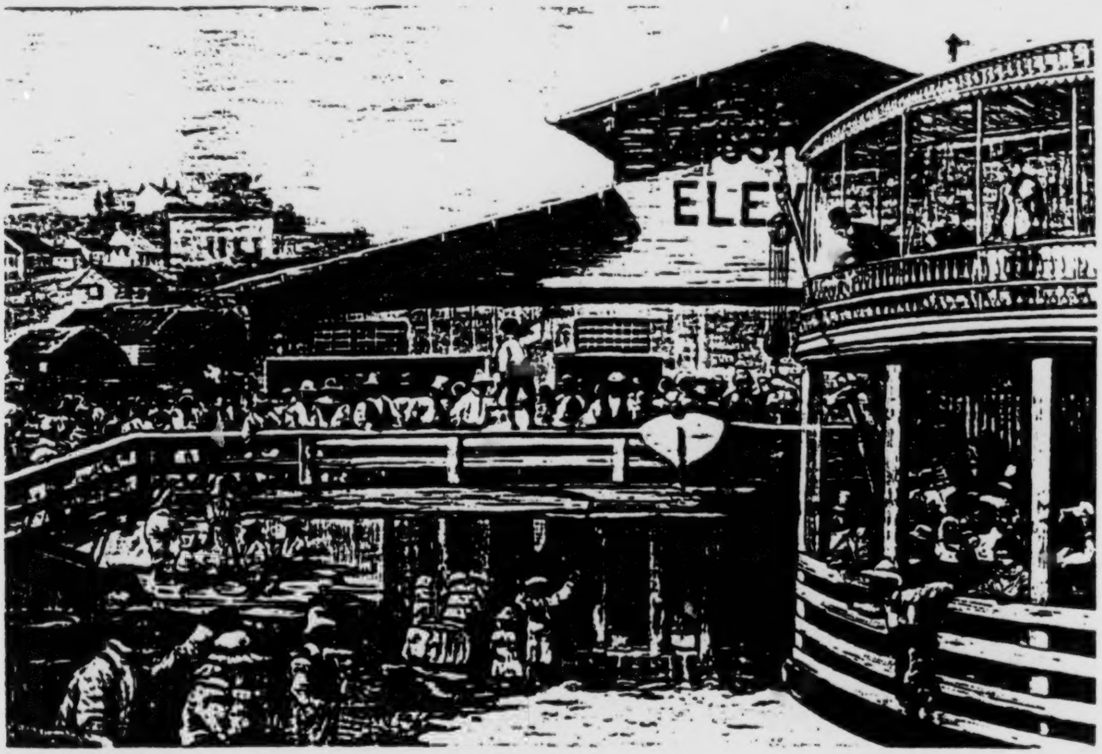
Immigrants at Castle Island, 1887

VISUAL #2



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Black Migration to the North

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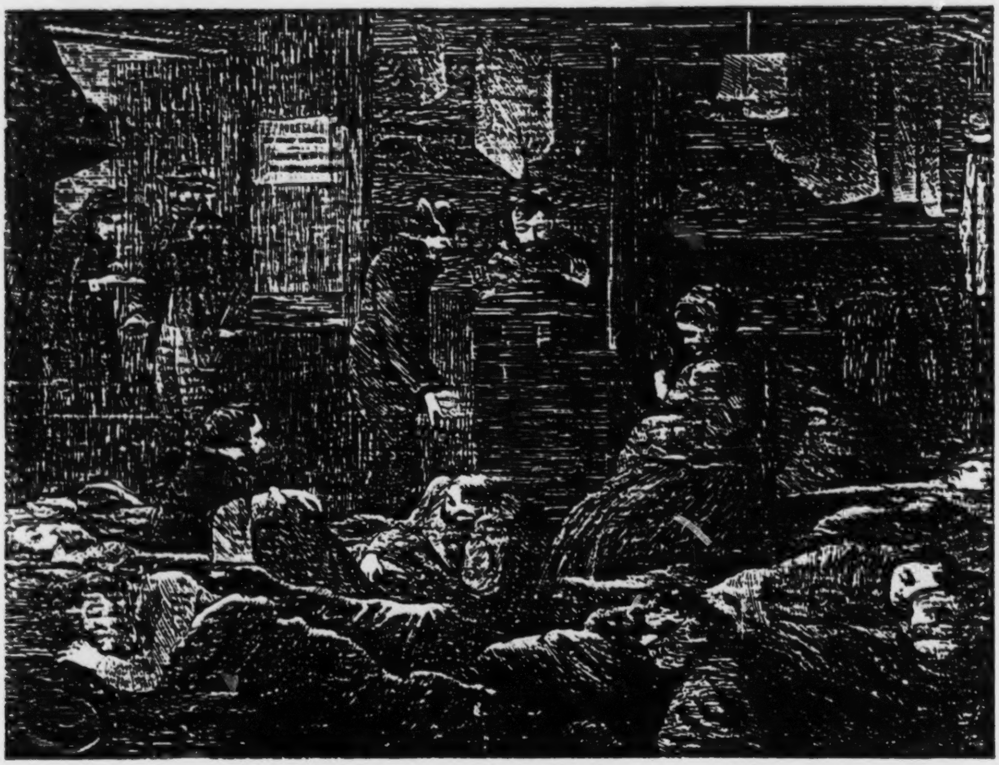

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Underground Lodgings for the Poor, Greenwich St., New York, 1869

VISUAL #4

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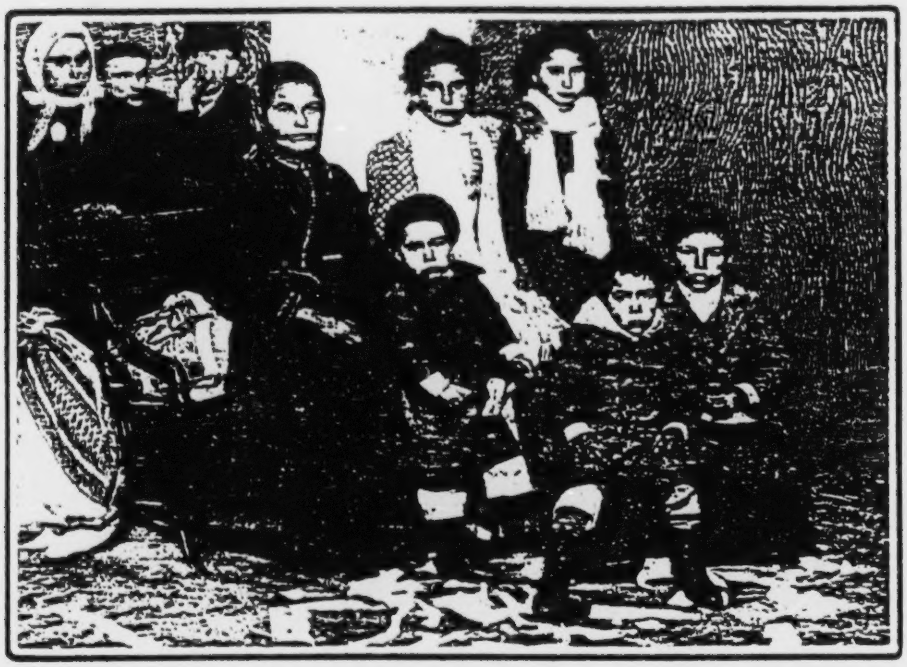
Black Workers

VISUAL #5



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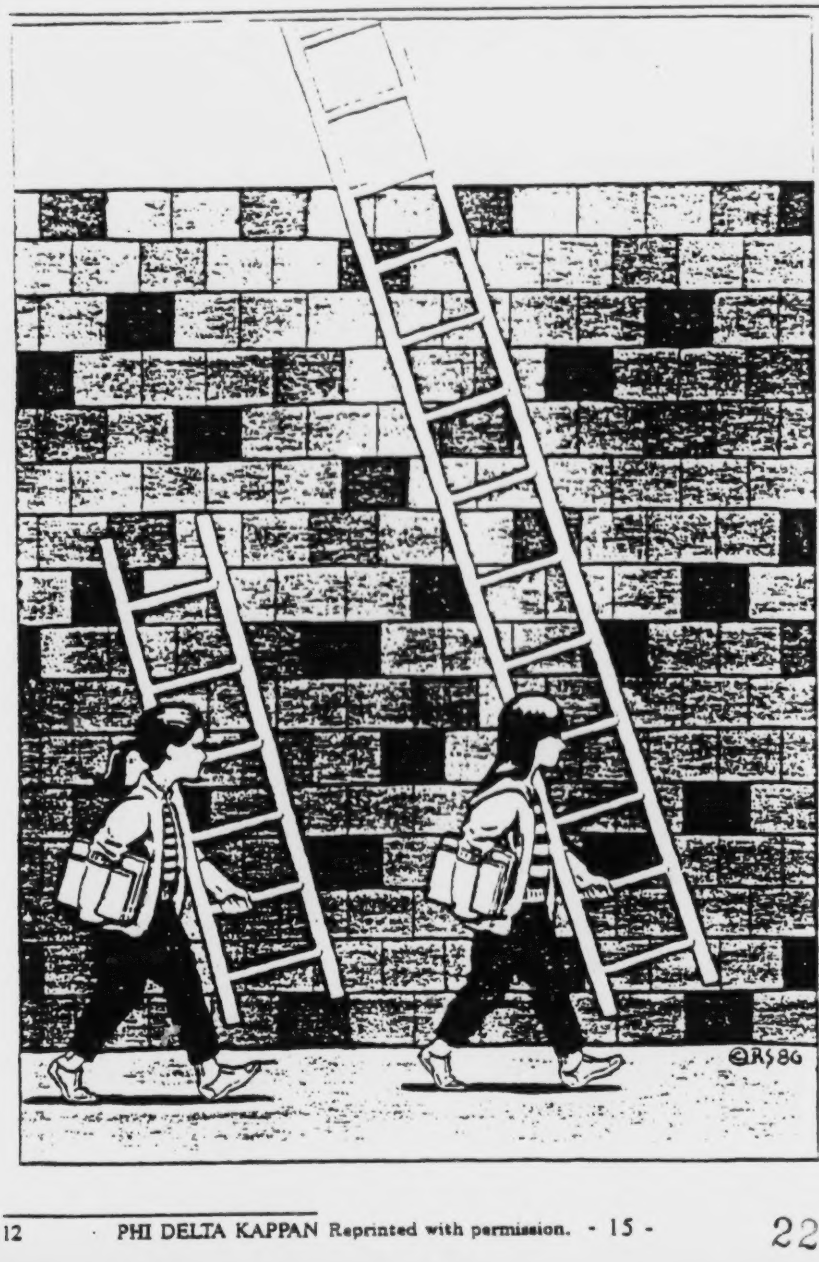
Prospective American Citizens

Keeping Track, Part 1: The Policy and Practice Of Curriculum Inequality



The basic features of schools may lock them into patterns that make it difficult to achieve either excellence or equality, says Ms. Oakes. The practice of tracking, for example, contributes to mediocre schooling for most secondary students.

BY JEANNIE OAKES

THE IDEA OF educational equality has fallen from favor. In the 1980s policy makers, school practitioners, and the public have turned their attention instead to what many consider a competing goal: excellence. Attempts to "equalize" schooling

JEANNIE OAKES is a social scientist with the Rand Corporation, Santa Monica, Calif. This article is an extension of analyses that appear in Keeping Track: How Schools Structure Inequality, *published by Yale University Press in 1985. The work was conducted under the auspices of the Laboratory in School and Community Education, Graduate School of Education, University of California, Los Angeles. "Keeping Track, Part 2: Curriculum Inequality and School Reform," will appear in the October* Kappan.

Illustration by Rob Saunders

in the Sixties and Seventies have been judged extravagant and naive. Worse, critics imply that those well-meant efforts to correct inequality may have compromised the central mission of the schools: teaching academics well. And current critics warn that, given the precarious position of the United States in the global competition for economic, technological, and military superiority, we can no longer sacrifice the quality of our schools to social goals. This view promotes the judicious spending of limited educational resources in ways that will produce the greatest return on "human capital." Phrased in these economic terms, special provisions for underachieving poor and minority students become a bad investment. In short, equality is out; academic excellence is in.

On the other hand, many people still argue vociferously that the distinction between promoting excellence and providing equality is false, that one cannot be achieved without the other. Unfortunately, whether "tight-fisted" conservatives or "fuzzy-headed" liberals are in the ascendancy, the heat of the rhetoric surrounding the argument largely obscures a more serious problem: the possibility that the unquestioned *assumptions* that drive school practice and the *basic features of schools* may themselves lock schools into patterns that make it difficult to achieve *either* excellence *or* equality.

The practice of tracking in secondary schools illustrates this possibility and provides evidence of how schools, even as they voice commitment to equality and excellence, organize and deliver curriculum in ways that advance neither. Nearly all schools track students. Because tracking enables schools to provide educational treatments matched to particular groups of students, it is believed to promote higher achievement for all students under conditions of equal educational opportunity. However, rather than promoting higher achievement, tracking contributes to mediocre schooling for *most* secondary students. And because it places the greatest obstacles to achievement in the path of those children least advantaged in American society – poor and minority children – tracking forces schools to play an active role in perpetuating social and economic inequalities as well. Evidence about the influence of tracking on student outcomes and analyses of how tracking affects the day-to-day school experiences of young people support the argument that such basic elements of schooling can *prevent* rather than *promote* educational goals.

WHAT IS TRACKING?

Tracking is the practice of dividing students into separate classes for high-, average-, and low-achievers; it lays out different curriculum paths for students headed for college and for those who are bound directly for the workplace. In most senior high schools, students are assigned to one or another *curriculum track* that lays out sequences of courses for college-preparatory, vocational, or general track students. Junior and senior high schools also make use of *ability grouping* – that is, they divide academic subjects (typically English, mathematics, science, and social studies) into classes geared to different "levels" for students of different abilities. In many high schools these two systems overlap, as schools provide college-preparatory, general, and vocational sequences of courses and also practice ability grouping in academic subjects. More likely than not, the student in the vocational curriculum track will be in one of the lower ability groups. Because similar overlapping exists for college-bound students, the distinction between the two types of tracking is sometimes difficult to assess.

But tracking does not proceed as neatly as the description above implies. Both curriculum tracking and ability grouping vary from school to school in the number of subjects that are tracked, in the number of levels provided, and in the ways in which students are placed. Moreover, tracking is confounded by the inflexibilities and idiosyncrasies of "master schedules," which can create unplanned tracking, generate further variations among tracking systems, and affect the courses taken by individual students as well. Elective subjects, such as art and home economics, sometimes become low-track classes because college-preparatory students rarely have time in their schedules to take them; required classes, such as drivers' training, health, or physical education, though they are intended to be heterogeneous, become tracked when the requirements of other courses that *are* tracked keep students together for large portions of the day.

Despite these variations, tracking has common and predictable characteristics:

- The intellectual performance of students is judged, and these judgments determine placement with particular groups.

> *Even as they voice commitment to equality and excellence, schools organize and deliver curriculum in ways that advance neither.*

- Classes and tracks are labeled according to the performance levels of the students in them (e.g., advanced, average, remedial) or according to students' postsecondary destinations (e.g., college-preparatory, vocational).
- The curriculum and instruction in various tracks are tailored to the perceived needs and abilities of the students assigned to them.
- The groups that are formed are not merely a collection of different but equally-valued instructional groups. They form a hierarchy, with the most advanced tracks (and the students in them) seen as being on top.
- Students in various tracks and ability levels experience school in very different ways.

UNDERLYING ASSUMPTIONS

First, and clearly most important, teachers and administrators generally assume that tracking promotes overall student achievement – that is, that the academic needs of all students will be better met when they learn in groups with similar capabilities or prior levels of achievement. Given the inevitable diversity of student populations, tracking is seen as the best way to address individual needs and to cope with individual differences. This assumption stems from a view of human capabilities that includes the belief that students' capacities to master schoolwork are so disparate that they require different and separate schooling experiences. The extreme position contends that some students cannot learn at all.

A second assumption that underlies tracking is that less-capable students will suffer emotional as well as educational damage from daily classroom contact and competition with their brighter peers. Lowered self-concepts and negative attitudes toward learning are widely considered to be consequences of mixed-ability grouping for slower learners. It is also widely assumed that students can be placed in tracks and groups both accurately and fairly. And finally, most teachers and administrators contend that tracking greatly eases the teaching task and is, perhaps, the *only* way to manage student differences.

THE RECORD OF TRACKING

Students clearly differ when they enter secondary schools, and these differences just as clearly influence learning. But separating students to better accommodate these differences appears to be neither necessary, effective, nor appropriate.

Does tracking work? At the risk of oversimplifying a complex body of research literature, it is safe to conclude that *there is little evidence to support any of the assumptions about tracking*. The effects of tracking on student outcomes have been widely investigated, and the bulk of this work *does not* support commonly-held beliefs that tracking increases student learning. Nor does the evidence support tracking as a way to improve students' attitudes about themselves or about schooling.[1] Although existing tracking systems *appear* to provide advantages for students who are placed in the top tracks, the literature suggests that students at all ability levels can achieve at least as well in heterogeneous classrooms.

Students who are *not* in top tracks – a group that includes about 60% of senior high school students – suffer clear and consistent disadvantages from tracking. Among students identified as average or slow, tracking often appears to retard academic progress. Indeed, one study documented the fact that the lowered I.Q. scores of senior high school students followed their placement in low tracks.[2] Students who are placed in vocational tracks do not even seem to reap any benefits in the job market. Indeed, graduates of vocational programs may be less employable and, when they do find jobs, may earn lower wages than other high school graduates.[3]

Most tracking research does not support the assumption that slow students suffer emotional strains when enrolled in mixed-ability classes. Often the opposite result has been found. Rather than helping students feel more comfortable about themselves, tracking can reduce self-esteem, lower aspirations, and foster negative attitudes toward school. Some studies have also concluded that tracking leads low-track students to misbehave and eventually to drop out altogether.[4]

The net effect of tracking is to exaggerate the initial differences among students rather than to provide the means to better accommodate them. For example, studies show that senior high school students who are initially similar in background and prior achievement become *increasingly* different in achievement and future aspirations when they are placed in different tracks.[5] Moreover, this effect is likely to be cumulative over most of the students' school careers, since track placements tend to remain fixed. Students placed in low-ability groups in elementary school are likely to continue in these groups in middle school or junior high school; in senior high school these students are typically placed in non-college-preparatory tracks. Studies that have documented increased gaps between initially comparable high school students placed in different tracks probably capture only a fraction of this effect.

Is tracking fair? Compounding the lack of empirical evidence to support tracking as a way to enhance student outcomes are compelling arguments that favor exposing all students to a common curriculum, *even if differences among them prevent all students from benefiting equally*. These arguments counter both the assumption that tracking can be carried out "fairly" and the view that tracking is a legitimate means to ease the task of teaching.

Central to the issue of fairness is the well-established link between track placements and student background characteristics. Poor and minority youngsters (principally black and Hispanic) are disproportionately placed in tracks for low-ability or non-college-bound students. By the same token, minority students are consistently underrepresented in programs for the gifted and talented. In addition, differentiation by race and class occurs within vocational tracks, with blacks and Hispanics more frequently enrolled in programs that train students for the lowest-level occupations (e.g., building maintenance, commercial sewing, and institutional care). These differences in placement by race and social class appear regardless of whether test scores, counselor and teacher recommendations, or student and parent choices are used as the basis for placement.[6]

> *The net effect of tracking is to exaggerate the initial differences among students rather than to provide the means to better accommodate them.*

Even if these track placements are ostensibly based on merit – that is, determined by prior school achievement rather than by race, class, or student choice – they usually come to signify judgments about supposedly fixed abilities. We might find appropriate the disproportionate placements of poor and minority students in low-track classes if these youngsters were, in fact, known to be innately less capable of learning than middle- and upper-middle-class whites. But that is not the case. Or we might think of these track placements as appropriate *if* they served to remediate the obvious educational deficiencies that many poor and minority students exhibit. If being in a low track prepared disadvantaged students for success in higher tracks and opened future educational opportunities to them, we would not question the need for tracking. However, this rarely happens.

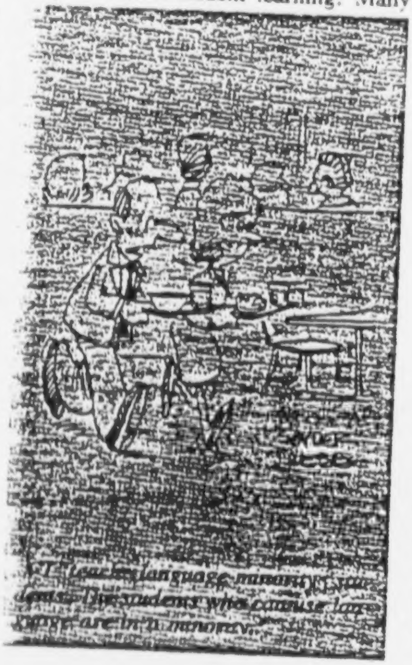
The assumption that tracking makes teaching easier pales in importance when held up against the abundant evidence of the general ineffectiveness of tracking and the disproportionate harm it works on poor and minority students. But even if this were not the case, the assumption that tracking makes teaching easier would stand up *only if* the tracks were made up of truly homogeneous groups. In fact, they are not. Even within tracks, the variability of students' learning speed, cognitive style, interest, effort, and aptitude for various tasks is often considerable. Tracking simply masks the fact that instruction for any group of 20 to 35 people requires considerable variety in instructional strategies, tasks, materials, feedback, and guidance. It also requires multiple criteria for success and a variety of rewards. Unfortunately, for many schools and teachers, tracking deflects attention from these instructional realities. When instruction fails, the problem is too often attributed to the child or perhaps to a "wrong placement." The fact that tracking *may* make teaching easier for some teachers should not cloud our judgment about whether that teaching is best for any group of students — whatever their abilities.

Finally, a profound ethical concern emerges from all the above. In the words of educational philosopher Gary Fenstermacher, "[U]sing individual differences in aptitude, ability, or interest as the basis for curricular variation denies students equal access to the knowledge and understanding available to humankind." He continues, "[I]t is possible that some students may not benefit equally from unrestricted access to knowledge, but this fact does not entitle us to control access in ways that effectively prohibit all students from encountering what Dewey called 'the funded capital of civilization.' "[7] Surely educators do not intend any such unfairness when by tracking they seek to accommodate differences among students.

WHY SUCH DISAPPOINTING EFFECTS?

As those of us who were working with John Goodlad on A Study of Schooling began to analyze the extensive set of data we had gathered about 38 schools across the U.S., we wanted to find out more about tracking.[8] We wanted to gather specific information about the knowledge and skills that students were taught in tracked classes, about the learning activities they experienced, about the ways in which teachers managed instruction, about the classroom relationships, and about how involved students were in their learning. By studying tracked classes directly and asking over and over whether such classes differed, we hoped to begin to understand why the effects of tracking have been so disappointing for so many students. We wanted to be able to raise some reasonable hypotheses about the ways in which the good intentions of practitioners seem to go wrong.

We selected a representative group of 300 English and mathematics classes. We chose these subjects because they are most often tracked and because nearly all secondary students take them. Our sample included relatively equal numbers of high-, average-, low-, and mixed-ability groups. We had a great deal of information about these classes because teachers and students had completed extensive questionnaires, teachers had been interviewed, and teachers had put together packages of materials about their classes, including lists of the topics and skills they taught, the textbooks they used, and the ways in which they evaluated student learning. Many teachers also gave us sample lesson plans, worksheets, and tests. Trained observers recorded what students and teachers were doing and documented their interactions.


language minority students. The students who can use language are in a minority.

The data gathered on these classes provided some clear and consistent insights. In the three areas we studied — curriculum content, instructional quality, and classroom climate — we found remarkable and disturbing differences between classes in different tracks. These included important discrepancies in student access to knowledge, in their classroom instructional opportunities, and in their classroom learning environments.

Access to knowledge. In both English and math classes, we found that students had access to considerably different types of knowledge and had opportunities to develop quite different intellectual skills. For example, students in high-track English classes were exposed to content that can be called "high-status knowledge." This included topics and skills that are required for college. High-track students studied both classic and modern fiction. They learned the characteristics of literary genres and analyzed the elements of good narrative writing. These students were expected to write thematic essays and reports of library research, and they learned vocabulary that would boost their scores on college entrance exams. It was the high-track students in our sample who had the most opportunities to think critically or to solve interesting problems.

Low-track English classes, on the other hand, rarely, if ever, encountered similar types of knowledge. Nor were they expected to learn the same skills. Instruction in basic reading skills held a prominent place in low-track classes, and these skills were taught mostly through workbooks, kits, and "young adult" fiction. Students wrote simple paragraphs, completed worksheets on English usage, and practiced filling out applications for jobs and other kinds of forms. Their learning tasks were largely restricted to memorization or low-level comprehension.

The differences in mathematics content followed much the same pattern. High-track classes focused primarily on mathematical concepts; low-track classes stressed basic computational skills and math facts.

These differences are not merely curricular adaptations to individual needs, though they are certainly thought of as such. Differences in access to knowledge have important long-term social and educational consequences as well. For example, low-track students are probably prevented from *ever* encountering at school the knowledge our society values most. Much of the curriculum of low-track classes was likely to lock students into a continuing series of such bottom-level placements because important concepts and skills were neglected. Thus these students were denied the knowledge that would enable them to move successfully into higher-track classes.

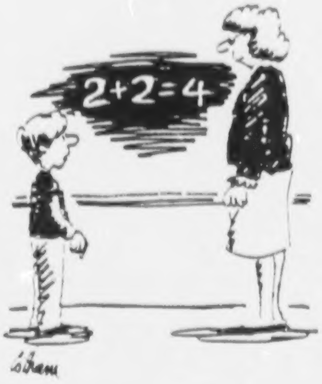
Opportunities to learn. We also looked at two classroom conditions known to influence how much students will learn: instructional time and teaching quality. The marked differences we found in our data consistently showed that students in higher tracks had better classroom opportunities. For example, all our data on classroom time pointed to the same conclusion: students in high tracks get more; students in low tracks get less. Teachers of high-track classes set aside more class time for learning, and our observers found that more actual class time was spent on learning activities. High-track students were also expected to spend more time doing homework, fewer high-track students were observed to be off-task during class activities, and more of them told us that learning took up most of their class time, rather than discipline problems, socializing, or class routines.

Instruction in high-track classes more often included a whole range of teacher behaviors likely to enhance learning. High-track teachers were more enthusiastic, and their instruction was clearer. They used strong criticism or ridicule less frequently than did teachers of low-track classes. Classroom tasks were more various and more highly organized in high-track classes, and grades were more relevant to student learning.

These differences in learning opportunities portray a fundamental irony of schooling: those students who need more time to learn appear to be getting less; those students who have the most difficulty learning are being exposed least to the sort of teaching that best facilitates learning.

Classroom climate. We were interested in studying classroom climates in various tracks because we were convinced that supportive relationships and positive feelings in class are more than just nice accompaniments to learning. When teachers and students trust one another, classroom time and energy are freed for teaching and learning. Without this trust, students spend a great deal of time and energy establishing less productive relationships with others and interfering with the teacher's instructional agenda; teachers spend their time and energy trying to maintain control. In such classes, less learning is likely to occur.

The data from A Study of Schooling permitted us to investigate three important aspects of classroom environments: relationships between teachers and students, relationships among the students themselves, and the intensity of student involvement in learning. Once again, we discovered a distressing pattern of advantages for high-track classes and disadvantages for low-track classes. In high-track classes students thought that their teachers were more concerned about them and less punitive. Teachers in high-track classes spent less time on student behavior, and they more often encouraged their students to become independent, questioning, critical thinkers. In low-track classes teachers were seen as less concerned and more punitive. Teachers in low-track classes emphasized matters of discipline and behavior, and they often listed such things as "following directions," "respecting my position," "punctuality," and "learning to take a direct order" as among the five most important things they wanted their class to learn during the year.



"There! Am I educated now?"

We found similar differences in the relationships that students established with one another in class. Students in low-track classes agreed far more often that "students in this class are unfriendly to me" or that "I often feel left out of class activities." They said that their classes were interrupted by problems and by arguing in class. Generally, they seemed to like each other less. Not surprisingly, given these differences in relationships, students in high-track classes appeared to be much more involved in their classwork. Students in low-track classes were more apathetic and indicated more often that they didn't care about what went on or that failing didn't bother most of their classmates.

In these data, we found once again a pattern of classroom experience that seems to enhance the possibilities of learning for those students already disposed to do well – that is, those in high-track classes. We saw even more clearly a pattern of classroom experience likely to inhibit the learning of those in the bottom tracks. As with access to knowledge and opportunities to learn, we found that those who most needed support from a positive, nurturing environment got the least.

Although these data do show clear instructional advantages for high-achieving students and clear disadvantages for their low-achieving peers, other data from our work suggest that the quality of the experience of *average* students falls somewhere between these two extremes. Average students, too, were deprived of the best circumstances schools have to offer, though their classes were typically more like those of high-track students. Taken together, these findings begin to suggest *why* students who are not in the top tracks are likely to suffer because of their placements: their education is of considerably lower quality.

It would be a serious mistake to interpret these data as the "inevitable" outcome of the differences in the students who populate the various tracks. Many of the mixed-ability classes in our study showed that high-quality experiences are very possible in classes that include all types of students. But neither should we attribute these differences to consciously mean-spirited or blatantly discriminatory actions by schoolpeople.

Obviously, the content teachers decide to teach and the ways in which they teach it are greatly influenced by the students with whom they interact. And it is unlikely that students are passive participants in tracking processes. It seems more likely that students' achievements, attitudes, interests, perceptions of themselves, and behaviors (growing increasingly disparate over time) help produce some of the effects of tracking. Thus groups of students who, by conventional wisdom, seem less able and less eager to learn are very likely to affect a teacher's ability or even willingness to provide the best possible learning opportunities. The obvious conclusion about the effects of these track-specific differences on the ability of the schools to achieve academic excellence is that students who are exposed to less content and lower-quality teaching are unlikely to get the full benefit out of their schooling. Yet this less-fruitful experience seems to be the norm when average- and low-achieving students are grouped together for instruction.

I believe that these data reveal frightening patterns of curricular inequality. Although these patterns would be disturbing under any circumstances (and though many white, suburban schools consign a good number of their students to mediocre experiences in low-ability and general-track classes), they become particularly distressing in light of the prevailing pattern of placing disproportionate numbers of poor and minority students in the lowest-track classes. A self-fulfilling prophecy can be seen to work at the institutional level to prevent schools from providing equal educational opportunity. Tracking appears to teach and reinforce the notion that those not defined as the best are *expected* to do less well. Few students and teachers can defy those expectations.

TRACKING, EQUALITY, AND EXCELLENCE

Tracking is assumed to promote educational excellence because it enables schools to provide students with the curriculum and instruction they need to maximize their potential and achieve excellence on their own terms. But the evidence about tracking suggests the contrary. Certainly students bring differences with them to school, but, by tracking, schools help to widen rather than narrow these differences. Students who are judged to be different from one another are separated into different classes and then provided knowledge, opportunities to learn, and classroom environments that are vastly different. Many of the students in top tracks (only about 40% of high-schoolers) do benefit from the advantages they receive in their classes. But, in their quest for higher standards and superior academic performance, schools seem to have locked themselves into a structure that may *unnecessarily* buy the achievement of a few at the expense of many. Such a structure provides but a shaky foundation for excellence.

> *Schools seem to have locked themselves into a structure that may unnecessarily buy the achievement of a few at the expense of many.*

At the same time, the evidence about tracking calls into question the widely held view that schools provide students who have the "right stuff" with a neutral environment in which they can rise to the top (with "special" classes providing an extra boost to those who might need it). Everywhere we turn we find that the differentiated structure of schools throws up barriers to achievement for poor and minority students. Measures of talent clearly seem to work against them, which leads to their disproportionate placement in groups identified as slow. Once there, their achievement seems to be further inhibited by the type of knowledge they are taught and by the quality of the learning opportunities they are afforded. Moreover, the social and psychological dimensions of classes at the bottom of the hierarchy of schooling seem to restrict their chances for school success even further.

Good intentions, including those of advocates of "excellence" and of "equity," characterize the rhetoric of schooling. Tracking, because it is usually taken to be a neutral practice and a part of the mechanics of schooling, has escaped the attention of those who mean well. But by failing to scrutinize the effects of tracking, schools unwittingly subvert their well-meant efforts to promote academic excellence and to provide conditions that will enable all students to achieve it.

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1. Some recent reviews of studies on the effects of tracking include: Robert C. Calfee and Roger Brown, "Grouping Students for Instruction," in *Classroom Management* (Chicago: 78th Yearbook of the National Society for the Study of Education, University of Chicago Press, 1979); Dominick Esposito, "Homogeneous and Heterogeneous Ability Grouping: Principal Findings and Implications for Evaluating and Designing More Effective Educational Environments," *Review of Educational Research*, vol. 43, 1973, pp. 163-79; Jeannie Oakes, "Tracking: A Contextual Perspective on How Schools Structure Differences," *Educational Psychologist*, in press; Caroline J. Persell, *Education and Inequality: The Roots and Results of Stratification in America's Schools* (New York: Free Press, 1977); and James E. Rosenbaum, "The Social Implications of Educational Grouping," in David C. Berliner, ed., *Review of Research in Education, Vol. 8* (Washington, D.C.: American Educational Research Association, 1980), pp. 361-401.

2. James E. Rosenbaum, *Making Inequality: The Hidden Curriculum of High School Tracking* (New York: Wiley, 1976).

3. See, for example, David Stern et al., *One Million Hours a Day: Vocational Education in California Public Secondary Schools* (Berkeley: Report to the California Policy Seminar, University of California School of Education, 1985).

4. Rosenbaum, "The Social Implications. . ."; and William E. Shafer and Carol Olexa, *Tracking and Opportunity* (Scranton, Pa.: Chandler, 1971).

5. Karl A. Alexander and Edward L. McDill, "Selection and Allocation Within Schools: Some Causes and Consequences of Curriculum Placement," *American Sociological Review*, vol. 41, 1976, pp. 969-80; Karl A. Alexander, Martha Cook, and Edward L. McDill, "Curriculum Tracking and Educational Stratification: Some Further Evidence," *American Sociological Review*, vol. 43, 1978, pp. 47-66; and Donald A. Rock et al., *Study of Excellence in High School Education: Longitudinal Study, 1980-82* (Princeton, N.J.: Educational Testing Service, Final Report, 1985).

6. Persell, *Education and Inequality*. . .; and Jeannie Oakes, *Keeping Track: How Schools Structure Inequality* (New Haven, Conn.: Yale University Press, 1985).

7. Gary D Fenstermacher, "Introduction," in Gary D Fenstermacher and John I. Goodlad, eds., *Individual Differences and the Common Curriculum* (Chicago: 82nd Yearbook of the National Society for the Study of Education, University of Chicago Press, 1983), p. 3.

8. John I. Goodlad, *A Place Called School* (New York: McGraw-Hill, 1984).

Keeping Track, Part 2: Curriculum Inequality And School Reform

Why does tracking persist? Why is the empirical evidence about its negative effects largely ignored? "De-tracking" schools will require difficult adjustments, explains Ms. Oakes, in this sequel to her September article.

BY JEANNIE OAKES

IN LAST month's *Kappan*, I offered a hypothesis that challenges conventional school practice. Tracking and ability grouping, both widely accepted as means of adapting curriculum and instruction to individual differences among students, may *obstruct* efforts to achieve two highly valued goals of schooling: helping students reach high levels of academic excellence and providing equal opportunities for all students to reach those levels.

I argued that compelling evidence indicates that the curricular and instructional *inequalities* that accompany tracking may actually foster mediocre classroom experiences for *most* students and erect special barriers to the educational success of poor, black, and Hispanic students. I also suggested that, despite this evidence, a largely unquestioned acceptance of the educational "soundness" of tracking has kept it firmly entrenched in school practice.

Here I will attempt to shed some light on this dilemma. First, I will sketch briefly some of the circumstances and beliefs that led to the institution of tracking (rather than to some *other* practice) for managing student diversity, and I will suggest how these social, political, and historical factors can continue to sustain deleterious tracking practices.

Second, I will offer some promising directions for altering ability grouping and tracking. However, if educators and policy makers choose to undertake such changes, they must reconsider much of what now takes place in their schools. Because of the profundity of the social and educational forces that support tracking, any change in this area will require an intensity not commonly seen in school reform.

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UNLOCKING THE TRADITION

Schools and tracking systems do not exist in isolation, untouched by the larger societal context. The beliefs, values, and circumstances that originally influenced the institution of tracking in comprehensive secondary schools may continue to shape current practice. A careful look at earlier conditions can help us discover why tracking (and not some other approach) developed in response to student diversity and why tracking is so resistant to change. Since today's educational problems, social context, and students do resemble those of 90 years ago in some ways, we must ask whether we are satisfied with the outcomes of this school practice and whether we should make the same choices today as were made then.

In the late 19th and early 20th centuries, the widespread practice of tracking and ability grouping developed as a response to a complex series of events: dramatically increased immigration from southern and eastern Europe, rapidly expanding and shockingly deteriorating cities, burgeoning factory-based industry and the decline of home-based manufacturing. These events combined to trigger a social crisis of major proportions.

Then as now, society looked to the schools for salvation. The expansion of a then quite rare institution – the free public high school – was seen as a solution to a whole array of problems: socializing new immigrants, providing an avenue for upward mobility, training workers for the factories, and providing proper supervision for footloose urban youth. But how could these new schools possibly accommodate either this new array of expectations or this diverse new school population?

The solution for schools was tracking and ability grouping – providing a differentiated curriculum to accommodate the needs of these "new" students, as well as fulfilling the more traditional function of providing "high-status" preparation for upper-class students. This solution emerged from a long and vigorous debate that engaged, in addition to educators, university presidents, social reformers, industrialists, and leaders of labor unions. Within this debate, such prevailing social ideas as social Darwinism, Americanization of immigrants, and scientific management contributed to a major shift in the commitment of American education to the idea of the common school as a central force in building a democratic society.

Although no simple conspiracy was at work to consign poor and ethnic minority students to inferior and unequal schooling, high schools that were tracked along the lines of race and class provided an acceptable solution to the considerable social disequilibrium. Among the vast array of social forces, three sets of beliefs stand out as the rationale that reconciled differentiation with democracy: the belief in the immutability of vast differences between population groups, the belief that secondary schooling should serve as a preparation for work, and the belief that democratic principles required the extension of secondary schooling to all.

Group differences. Among the educational and political leaders who shaped the new public secondary school at the turn of the century, there were those who believed that the intellectual, moral, and even biological differences among various groups of adolescents were vast and immutable. For example, a misguided social Darwinism posited that darker-skinned, recently arrived immigrants were on a fundamentally lower rung of the evolutionary ladder than were the children of the "native" stock – that is, northern Europeans.

These supposedly inherent group differences were seen to include enormous differences in students' potential for school learning. Moreover, the curriculum that was thought to be suitable for a more advanced group (white Protestants, for the most part) was viewed as entirely inappropriate for those of lesser capabilities (predominantly Catholic and Jewish immigrants from southern and eastern Europe). For example, intelligence test pioneer Lewis Terman wrote of the latter group, "Their dullness seems to be racial. . . . Children of this group should be segregated in special classes. . . . They cannot master abstractions, but they can often be made efficient workers."[1] Although Terman's views did not go uncontested, school tracking practices eventually corresponded to these assumptions.

Purposes of schooling. Terman's statement also responded to an emerging belief that a critical role of public secondary schooling was the preparation and certification of students for work. For the first time, students who would not become scholars, professionals, or members of the elite were attending secondary schools. The traditional academic curriculum seemed a mismatch for such students, particularly for immigrant youth. Industrial employers wanted to hire immigrants who were trained in certain technical skills and who had acquired the work habits and attitudes required to fit in as factory workers. That is, employers needed students who possessed proper deportment, punctuality, and willingness to be supervised and managed.

> Well intentioned, hard-working people appear locked into a school structure that contradicts the expressed goals of schooling.

These requirements of industry coincided with the absence of a curriculum that seemed appropriate for lower-class and immigrant youth. The link between schooling and work provided the substance of a differentiated curriculum: college-preparatory tracks prepared and certified some students for further education, while vocational programs readied others for work. Commenting on these new curriculum tracks, one school administrator wrote, "We can picture the educational system as having a very important function as a selecting agency, a means of selecting the men of best intelligence from the deficient and mediocre."[2]

Democratic education. Ellwood Cubberly, one of the most prominent educational scholars of the time, wrote in 1909, "Our city schools will soon be forced to give up the exceedingly democratic idea that all are equal, and our society devoid of classes . . . and to begin a specialization of educational effort along many lines in an attempt to adapt the school to the needs of these many classes."[3]

Though consistent with Cubberly's prescription, the prevailing response of the schools was more in keeping with American values of fairness and opportunity. Tracking was seen as a way to incorporate student differences and the sorting function of schools into a new form of democratic schooling. In 1908 the superintendent of schools in Boston articulated this shift: "Until very recently [the schools] have offered equal opportunity for all to receive *one kind* of education, but what will make them democratic is to provide opportunity for all to receive education as will fit them *equally well* for their particular life work."[4]

The rich and intriguing history that I have barely touched on here provides the context for understanding why tracked schools made sense to turn-of-the-century policy makers and practitioners charged with providing educational opportunities for a new population of students.[5]

The problem of educating diverse groups of students, compounded by entrenched beliefs about racial and ethnic differences, was met with a solution that relied on a newly coined view of democracy and the emerging function of school as the accepted preparation for varying adult opportunities. This solution defined student differences and appropriate educational treatments in *social* as well as *educational* terms. At the same time, the use of standardized tests provided a seemingly scientific and meritocratic basis for the sorting process in schools. But surely tracking was more than a technical solution to an instructional problem. Tracking helped to institutionalize beliefs about race and class differences in intellectual abilities and to erect structural obstacles to the future social, political, and economic opportunities of those who were not white and native-born.

THE LEGACY IN TODAY'S SCHOOLS

Today, too, many people, both in and out of school, hold that intellectual aptitude and prospects for school performance are not only linked to race and class, but also are profound and, for all practical purposes, unchangeable. Although biology is less often blamed for these differences today than environmental factors, the commonly held judgment that poor blacks and Hispanics will *characteristically* face insurmountable learning difficulties and that Asians are *by nature* prone to achieve well in school provide two contemporary examples.

> Much of the practical concern about tracking reform centers on the extreme difficulty of teaching classes with a wide range of ability.

Furthermore, it is widely believed that the differences among students cannot be accommodated within a common schooling experience. Witness the proliferation of "pull-out" compensatory programs for the poor and of separate programs for limited-English speakers, as well as the all-too-frequent placement of black students with severe learning problems in programs for the "educationally retarded," while whites with similar difficulties are placed in classes for the "learning disabled." All these practices, moreover, are carried out under the banner of providing "special help" to the students. The view is also firmly entrenched that separate and differentiated curricula are needed to prepare and certify students for their appropriate roles as adults in the workplace.

So powerful is the tradition of tracking and so unquestioned is its general efficacy that even schools with largely homogeneous populations often track their students as rigidly as schools with diverse populations. This is not to say, however, that all schools track in the same way.

For example, tracking tends to vary among schools serving students of different backgrounds in ways that recall turn-of-the-century views of group differences. Schools serving predominantly poor and minority populations typically offer fewer advanced courses and a greater number of remedial courses in academic subjects; they have smaller academic tracks and larger vocational programs; in some cases their college-preparatory classes are less rigorous.[6] Vocational programs often reveal characteristic differences as well, with schools serving middle-class whites offering more classes in business and in science-related fields and schools serving poor minority students offering more classes in low-level preparation for trades and such essentially unskilled work as agricultural crop-picking and building maintenance.[7] In these ways schools use tracking to design programs that "make sense," that are in keeping with their views of their student populations and of the kind of education deemed appropriate for them.

This phenomenon should not be viewed as a simple case of discrimination by race or class. Minority students and poor students *are* typically lower in achievement by the time they reach secondary school, and the secondary schools respond to these differences with largely well-meant programs that they judge to be educationally appropriate for these students.

What is critically important, however, is that lower-track and vocational programs are often detrimental to the students in them. Ample evidence suggests that placement in these programs begins a cycle of restricted opportunities, diminished outcomes, and growing achievement differences between low-track students and their counterparts in higher tracks. These placements do not appear either to overcome students' academic deficiencies or to provide them with future access to high-quality learning opportunities.

Why, then, despite these disappointing outcomes, does tracking persist? And why is the empirical evidence about its negative effects largely ignored? One possible answer is embedded in the historical use of tracking for social as well as educational purposes.

Although tracking, ability grouping, and differentiated curricula are generally regarded as *educational* decisions, these conventional and little-questioned responses to student differences stem from a tradition that has far less to do with education than it does with providing what society-at-large believes to be "appropriate" for different types of students. Tracking may stem more from what society perceives as *its* needs than from what would most benefit students. Because of these important social meanings, evidence about the educational effects of tracking is only partly relevant to the ongoing operation of schools. Consequently, schoolpeople are frustrated in their attempts to achieve *educational* ends (academic excellence) by means of *socially influenced* definitions of appropriate school practice.

DIRECTIONS FOR CHANGE

School practitioners support tracking largely because they are convinced that, considering the tradeoffs, it is best for students. Because tracking enables schools to provide differentiated curricula and instruction, practitioners believe that students placed in the "right track" will have the best opportunity for success in school.

Empirical evidence suggests that a substantial gap exists between these intentions and the effects of tracking. Well-intentioned, hard-working people appear locked into a school structure that contradicts the expressed goals of schooling. This is surely testimony to the power and complexity of tracking and should foreshadow the difficulties of reform.

As long as race and class inequities exist in the larger society, it is unlikely that schooling opportunities and benefits for the disadvantaged will ever equal those of more privileged whites. Nevertheless, schools are not condemned to exacerbate these differences by funneling students into tracks, and some promising directions for altering the practice of tracking do exist.

Promoting heterogeneity. The first and most obvious way to undo the negative effects of tracking is to reorganize schools so that "similar" students are not grouped for instruction. This is obvious enough, and it follows not only from the detrimental effects of tracking, but from the considerable educational promise of heterogeneous classrooms, as well.

The bulk of the research literature on tracking (discussed in Part 1 of this article, which appeared in the September *Kappan*) indicates that *even under usual circumstances* nearly all students can learn as well in heterogeneous groups as in tracked classrooms and that students identified as average or below average often do better in heterogeneous settings. In addition, we found in A Study of Schooling that heterogeneous classes can provide a positive alternative in many ways.[8] In important areas of curriculum and classroom instruction, heterogeneous classes were considerably better off than low tracks. More than half of these mixed-ability classes were among those with the friendliest relationships among peers.

This is good news for teachers and administrators. Practitioners almost universally recognize and lament the negative consequences of tracking on students in low-track classes; most have had discouragingly unsuccessful experiences trying to make these programs work. Many suspect that, when the lowest-achieving and worst-behaved students are grouped together for instruction, everyone in that class performs far below potential.

But the concerns of educators about protecting the educational opportunities of the top-track students are even more salient in the school culture. Research findings that show that able students are likely to continue to do well even when placed in heterogeneous groups do not seem to make sense to practitioners.

As we saw in the classrooms we observed for A Study of Schooling, tracking offers clear educational and social advantages to students in the top tracks. The contrary finding that top students can learn equally well in mixed-ability classes doesn't seem to account for the noticeable and concrete advantages offered by high tracks that practitioners, students, and parents can see in their own schools. Where tracking exists, the top tracks offer more opportunities to the students in them; it is difficult to give up that particular "bird in the hand" for promises that top students would do "no worse" if tracking were stopped. In addition, since parents and teachers of high-track students are often the most visible, vocal, and respected school constituencies, the concerns for "all the others" who might benefit tend not to be as fully represented.

Promising findings about heterogeneous classrooms should not lead us to believe that all the problems of schooling would be solved simply by mixing students up and leaving everything else in schools untouched. Tracking reform must go beyond simply exchanging heterogeneous for homogeneous classes. Even if such a simple scenario were possible, it would be unlikely to be effective. What these findings do provide, however, is evidence that curricular inequality is *not* inevitable.

Reconstructing the curriculum. Much of the practical concern about tracking reform centers on the extreme difficulty of teaching classes with a wide range of student ability. As long as curriculum is presented as a sequence of topics and skills that require prerequisite knowledge and prior mastery of certain skills, teaching heterogeneous groups of students will remain problematic.

Students do differ, and the most striking differences among them seem to be in the speed with which they master sequentially presented skills. Sequentially arranged material is better suited for students who are grouped according to ability. For, unless students are similar in learning "speed," such a curriculum raises horrendous problems of pacing. Some students are ready to race ahead; others lag behind. Enrichment for the quicker students often involves extra work; reteaching the slower students becomes a chore; being retaught (and often retaught again) becomes a humiliation for the slower students, particularly if others are simply waiting for them to catch up.

Many curriculum experts argue that this "scope and sequence" approach does a disservice to students, regardless of whether they are slow or quick and regardless of whether they are in heterogeneous or tracked classes. They suggest that the curriculum that is well-suited to diverse groups of students is the curriculum to be preferred in all settings.

For example, John Goodlad suggests that curriculum might better be organized around central ideas and themes and that these be the focus of what students learn throughout their schooling.

"The principal said I showed a lot of initiative today. She said if I do it again, she'll expel me."

Students can then acquire specific knowledge and skills as they are ready *within a common conceptual framework*. In mathematics, Thomas Romberg suggests a common curriculum organized around the major mathematical processes of abstracting, inventing, proving, and applying.[9] With such a concept-based approach to curriculum, the range of skill differences becomes a far less formidable obstacle to teaching and learning. It is also important to remember that these are sound curricular approaches for *all* students – not compromises in order to "do good" for the disadvantaged.

Restructuring classroom instruction. Maintaining current instructional practices in heterogeneous classrooms is a mind-boggling proposition to practitioners already struggling with too many students and ever-increasing expectations for improved achievement. Instruction in secondary schools (regardless of track) is grounded in the assumption that the students are grouped homogeneously. It is characterized by competitive whole-group instruction, lecturing as the prevailing teaching strategy, common assignments, uniform due dates and tests for all students, and a single set of standards of competence and criteria for grades. Diversity among students *within* tracks is evident, but it is not thought to be great enough to require different learning experiences.

Practitioners do not resist an end to tracking because they have had extensive experiences *trying* to teach heterogeneous groups at the secondary level; indeed, few have had such experiences at all. Rather, they resist because they cannot imagine mixing what they believe to be two or three distinctly different groups of students and maintaining the high quality of instruction that they now see *high-ability* groups receiving. However, there *are* approaches to working productively with heterogeneous classroom groups. But these approaches require a reconsideration of the ways in which classrooms are currently organized.

Although this sounds overwhelming, recent research on the sociology of the classroom has identified specific kinds of changes in the task and reward structures of classrooms, in student interaction, and in evaluation processes that can greatly facilitate learning in heterogeneous classrooms. These classroom changes are particularly promising because they not only enable students to learn the task at hand, but they can also alter teachers' and students' conceptions of the intellectual ability of low-achieving students.[10] Furthermore, many of these concepts are currently being developed into specific and transportable strategies for teaching and learning. Cooperative learning is one such strategy that is embraced enthusiastically by many practitioners.[11]

Instruction in secondary schools (regardless of track) is grounded in the assumption that the students are grouped homogeneously.

Going beyond technology. Alterations in school organization, curriculum, and classroom instruction, as described above, are promising. But they touch only the *technological* side of tracking, and these technological changes, though major, are likely to be the easiest aspect of tracking reform.

Seriously considering "de-tracking" schools will require changes far more difficult than applying altered technologies. Genuine tracking reform will demand dramatically altered assumptions about students, about learning, and about the purpose of schooling.

Just as the implicit assumption that some students can't or won't learn underlies the practice of tracking, so the belief that all students can and will learn underlies the successful implementation of heterogeneous grouping. With such a shift in thinking, the commonly accepted view of intelligence as a "standardized" dimension on which students can be compared and ranked according to their performance on particular tasks may prove to be dysfunctional. It may be more useful to view intelligence as a standard that all students are capable of attaining. For example, intelligence might be more appropriately defined as "competence" – the ability to use learning environments to develop cognitive processes, to acquire knowledge, and to refine skills at problem solving.[12] With such a definition, all students could be considered intelligent and, perhaps even more important, educable.

Moreover, to "de-track" schools effectively, we must reconsider our views of the purpose of schools. For just as tracking is central and essential to a system that separates winners from losers and certifies students for adult work roles, so schools without tracking will be able to focus on educational goals to be achieved by all children. To reform tracking practices, schools will need to place less emphasis on identifying, labeling, sorting, and certifying for roles in larger social and political settings and more emphasis on providing opportunities for individual development.

But, as our brief foray into history illustrated, schools and school reform operate within a social context. Definitions of "individual differences," prescriptions of what students "need," and determinations of the purpose of schooling are as much *social* as they are *educational* choices. Students who are identified as *less able* are often those who have less, both socially and economically. These children are often seen as more disposed to working with their hands rather than with their heads. What they "need" is not seen to be the same abstract knowledge and skills that are needed by their abler (and often more affluent) peers. What they need is often thought to be the rudimentary skills of functional literacy and good deportment that will provide them entry into the lower levels of the workforce.

Given these socially influenced definitions, the public and practitioners alike will not be easily persuaded that a largely common curriculum taught mostly in heterogeneous groups is a promising approach to educating diverse groups of students. Changes in school practice must pass "social" as well as "educational" tests. Certifying some for entrance into colleges and universities and preparing others with basic functional skills and acceptable workplace behaviors are the job that society *expects* its schools to perform. Even if all practitioners were convinced of the educational value of de-tracking schools, the tracked curriculum might continue to be well-suited for fulfilling the social purposes of schooling. Indeed, some radical critics of the schools suggest that attempts to change tracking are futile without concomitant efforts to alter the social structures and ideologies that sustain it.

HOW DO WE GET THERE?

Schools are not "stuck" with tracking simply because it's a complex and difficult problem to solve. Nor are they compelled to continue a practice that reinforces educational inequalities simply because it matches the inequalities in the larger society. Because of these complexities, however, the type of change required to do away with tracking is not commonly attempted in schools.

The directions for reform suggested above should, if nothing else, make clear the enormity of the challenge that tracking and ability grouping present. My recommendations here will not satisfy many. They are likely to frustrate those well-intentioned educators and policy makers who would like to undo the "bad effects" of tracking without disrupting everything else. These are the people who ask such "practical" questions as, "How can we de-track schools and still maintain our Advanced Placement program?" or "Should all ninth-graders take algebra regardless of their mastery of the prerequisite skills?" or "How can we use heterogeneous groups when our basal reading series is organized by reading levels?" or "Wouldn't tracking work just fine if we could persuade teachers (especially those who teach in low tracks) to raise their expectations and to improve their classroom management skills?"

"Darn, I can never guess the ending."

Instead of providing "realistic" or "practical" solutions, the recommendations I have offered challenge the conventional wisdom of practitioners, the accepted modus operandi of school policy makers, and the vested interests of many parents. They suggest that reform will require the rethinking and restructuring of much of what is now taken for granted about schooling. They also suggest that changing tracking will require more than the use of such commonly accepted strategies for improving schools as conducting needs assessments, developing a one- or two-year plan, and buying the services of a consultant for staff development.

There is still much to be learned about how tracking works and why it persists in schools. For change to occur, these questions must become the objects of intense inquiry. We must discover how long-standing traditions, school and district guidelines, standards of common practice, and beliefs about students' abilities and limitations translate into day-to-day decisions about which tracks schools should offer, which tracks students should be assigned to, and what students should learn in different tracks. We must discover how students' family backgrounds, motivations, peer-group influences, and self-concepts interact with their track placements to produce differences in achievement and attitudes. We must discover the extent to which turn-of-the-century beliefs about race and class differences continue to affect teachers' and administrators' responses to poor and minority children. These are appropriate questions for research, and researchers can (and increasingly will) shed useful light on these tracking processes and effects.

But essential and useful as answers to such questions may be, it is unlikely that, given the history of tracking, information alone will spur significant reform. Unless research knowledge is supported by *inquiry within schools, local school districts, and state education agencies themselves*, little change is likely to occur. Those in and around schools must make efforts to understand how tracking works and what values and interests it represents. These efforts will probably need to include extensive school- or district-based data collection about tracking practices, critical reflection and extended dialogue about the values and assumptions that underlie these practices, and liberal experimentation with countervailing organizational and instructional processes.

Such activities go far beyond typical improvement processes that focus largely on the technical and managerial aspects of school problems. But they are likely to provide a rich store of knowledge, values, and experiences that will enable practitioners to tackle the problem of tracking.[13] While this may sound like an unrealistic and impractical approach to school change, schools and districts that have attempted tracking reforms (although their number is small) often report that this kind of inquiry process ultimately proves to be more "realistic" and "practical" than conventional approaches because it makes it easier for practitioners and their communities to recognize and alter previously unquestioned practices that conflict with their commitment to educate all students well.[14]

Values, history, and politics that include, but go far beyond, matters of pedagogy and human learning underlie school tracking practices. Changing such practices will require the careful, open, tolerant, and generous probing of the experiences, assumptions, values, and knowledge of those whose lives are most affected by it: students, teachers, administrators, and communities. Inquiry, reflection, and thoughtful dialogue among policy makers, practitioners, and their constituents is an arduous and rarely attempted undertaking in education. But we should expect to do no less if we intend to make schools humane, equitable, and truly educational places.

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1. Lewis Terman, *Intelligence Tests and School Reorganization* (New York: World Book Co., 1923), p. 28.

2. William B. Pillsbury, "Selection: An Unnoticed Function of Education," *Scientific Monthly*, vol. 12, 1921, p. 71.

3. Ellwood P. Cubberly, *Changing Conceptualizations of Education* (Boston: Houghton Mifflin, 1909), pp. 15-16.

4. Boston Schools, *School Documents*, No. 7, 1908.

5. Fortunately, this history has been richly detailed in many fine studies. See, for example, Raymond E. Callahan, *Education and the Cult of Efficiency* (Chicago: University of Chicago Press, 1962); David A. Cohen and Marvin K. Lazerson, "Education and the Corporate Order," *Socialist Revolution*, vol. 2, 1972, p. 53; Stephen Jay

ACCESS TO KNOWLEDGE:
BREAKING DOWN SCHOOL BARRIERS TO LEARNING

by

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FOREWORD

This paper is the eighth of an Education Commission of the States (ECS) series focusing on the problems of youth at risk of not successfully making the transition to adulthood -- the dropout, the underachiever and far too many others of our young people who end up disconnected from school and society. The topic of this paper is not one on which we frequently get questions from state policy makers; however, a growing number of educational researchers think it is the key to better serving all our youngsters. The topic focuses on school policies that intentionally limit a student's access to knowledge. Pamela Keating and Jeannie Oakes identify four categories of school policies that work to limit the likelihood that "at-risk" youngsters will reach their learning potential: testing practices, grouping and tracking practices, curriculum and instruction practices and school management practices.

This paper represents an important collaborative effort among the authors, the Center for Educational Renewal, the College Board and ECS. The College Board and ECS shared the costs associated with the writing and production of this paper. ECS is very proud of this partnership and will continue to work with these individuals and the College Board to develop effective policy options for youngsters at risk of school failure.

Pamela Keating is the associate director of the Institute for the Study of Educational Policy at the University of Washington. Trained in law and education, her work focuses on equity issues, particularly policies related to equal access and opportunity, as well as gender issues. Jeannie Oakes is a social scientist at the Rand Corporation. She has conducted studies of school and district policies including the assessment of tracking practices on curriculum content, teaching practices and classroom process. Her particular interest is learning opportunities for poor and minority students.

This collaboration would not have occurred without the encouragement of John Goodlad, director of the Center for Education Renewal at the University of Washington and Adrienne Bailey, vice president for academic affairs at the College Board. Their commitment to a quality document and to collaboration was greatly appreciated. Finally, we would like to thank the Carnegie Corporation of New York and the Andrew W. Mellon Foundation for supporting this working paper series.

Frank Newman

Frank Newman
ECS President

Bob Palaich

Bob Palaich
Project Director

INTRODUCTION[1]

There are historical, legal and moral imperatives for breaking down school barriers that limit children's access to knowledge. The traditional political value of education in the United States argues for extending schooling benefits to all children and youth. Protecting educational opportunities for all citizens means that school access must be equitable.

Some school conditions prevent many students from obtaining full advantage from schooling, limiting their learning because of the school's response, individual characteristics of race, gender, economic circumstances and various vulnerabilities. Other barriers are built in to how the nation conducts schooling generally -- the ways that schools assess intelligence and ability, group and track children for instruction, fragment and trivialize curriculum and instruction, and organize and manage schools. Of course, the individual and school barriers interact with each other, and it is not surprising that those children most at risk of frustration and failure in school because of their race, gender, individual handicaps or economic situation suffer most from deficits in the way schools are conducted.

To be truly fair, schools must ensure equal educational opportunities to all students, regardless of personal circumstances. Moreover, schools are required to compensate for individual disadvantage in equalizing access to schools and school programs. Where school practice, itself, limits students' chances for education, special correctives are required to ensure all students' full participation.

Historical Responsibilities

Leaders in the early Republic recognized the importance of education in the development of political democracy. They moved rapidly to provide educational opportunities.

For the past 150 years, schools have been charged with preparing a uniquely diverse electorate for effective participation in democratic decision making and with forging common cultural bonds that transcend demographic and economic differences. Much of the early impetus for these democratic sentiments was directed toward Americanizing immigrants. Since the Second World War, the nation has widened its view of what it means to equalize social opportunity through schooling.[2] That view offers educational opportunity to everyone, including all those most disadvantaged whose fullest productivity a vital society requires.

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[1] These policy issues are drawn from papers commissioned by the Center for Educational Renewal at the University of Washington with support from the College Board. Edited by John Goodlad and Pamela Keating, these papers will be published as a book, with additional material by the College Board, in early 1989. The individual papers are listed at the end of this paper.

[2] Henry Steele Commager, "Our Schools Have Kept Us Free," Life, October 16, 1950, pp. 46-47.

Legal Duties

Several legal breakthroughs highlight postwar efforts to equalize educational opportunity:

- Brown v. Board of Education -- finding racial segregation to be inherently unequal
- Title IX -- protecting against discrimination in education on the basis of gender
- Public Law 94-142 and similar state legislation -- providing for handicapped students' special needs in order to participate fully in public schooling.

Through these and other state and federal laws and court decisions, the country has ended de jure segregation, expanded educational access for women, made school programs and facilities more accessible to handicapped student, and chipped away at many of the most blatant denials of equal opportunity. These and other mandates indicate how seriously society takes its public obligation to guarantee all students ample and high-quality opportunities for education.

Moral Commitments

John Dewey challenged the nation to consider education's relevance to the democratic principles of our society. A social return is demanded from all; opportunity must be extended to all. Every person counts. But Dewey was not speaking simply of maximizing "human capital" for social ends; he asked public schools to educate everyone because it is the right thing to do morally and ethically.[3] To meet Dewey's challenge, schools need to account for students' unequal prior experiences that exacerbate their differential access to opportunity -- whether or not these differences were initially caused by schooling itself.

Through compensatory and categorical programs, schools have attempted to counteract the effects of racial isolation and poverty. Some well-designed Head Start programs have yielded long-term benefits, as have desegregation plans that begin with the youngest children and are sustained over time. Specific resources have been directed to meet handicapped students' special needs.

The nation has attempted to make schooling fair -- to give all children equal opportunity. Yet the best efforts have been relatively small in scale -- touching the lives of only a small number of those who need them. For all the focus on fairness, schools have consistently fallen short of interrupting the patterns of school failure and limited life chances of the most disadvantaged students. Much work remains to be done.

Research reveals what many of the problems are, and there is enough knowledge to act. Educators need to consider both the conditions over which schools can have some control and the conditions that require a broader social infrastructure that supports children's education. There has been considerable progress in identifying and documenting who needs these supports the most, and in determining what school conditions are necessary to deliver the best education to those children. What remains is a matter of combining this knowledge of what needs to be done with the will to do it.

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[3] John Dewey and James Tufts, Ethics, New York: Henry Holt and Co, 1908, p. 474.

RACE, POVERTY, GENDER AND INDIVIDUAL VULNERABILITIES

- The quality of education children receive can be predicted -- to a considerable degree -- by their race. Black, Hispanic and other non-Asian minorities typically will not receive equal or high-quality opportunities in schools.
- The quality of education children receive can be predicted -- to a considerable degree -- by their parents' income. Children from poorer families typically will not receive equal or high-quality opportunities in schools.
- The quality of education a child receives can be predicted -- to a considerable degree -- by his or her gender. Girls, typically will not receive equal or high-quality opportunities in schools in subjects like science, mathematics and technology.
- The quality of education children receive can be predicted -- to a considerable degree -- by the presence or absence of physically or socially debilitating handicaps. Those children with individual vulnerabilities and social disadvantages will typically not receive equal or high-quality opportunities in school.

Race

Court rulings and corrective legislation have eliminated some gross inequities in education, such as racial segregation, unequal allocation of resources, and blatantly inadequate or inappropriate materials. Nonetheless, biased texts and tests, prejudice among students and school personnel, differential classroom treatment and disproportionate disciplinary action replicate out-of-school conditions in courses and classwork in ways that will exclude great numbers of minority students from full school participation.

Classifications according to ability often reflect language and cultural diversity rather than actual differences in capacity. Poor and minority students seldom experience the enriched and higher-status curriculum associated with advantaged, advance-track students. Large, low-track programs are found in schools with higher percentages of racial minority students. Fewer advanced courses and smaller academic tracks, along with more remedial offerings in academic subjects and larger vocational programs, are found in schools serving predominantly poor and minority populations (Oakes and Lipton).

Underqualified teachers are disproportionately found in predominantly black, Hispanic and American Indian schools and classrooms. Teacher shortages are most acute and underqualified entrants to teaching are most numerous in the central city schools where most poor and minority students reside (Darling-Hammond). Those who need good teaching and who have the least resources for remedying the effects of social and economic isolation draw the least prepared and temporary teachers.

Minority students carry the additional burden of their own distrust of the dominant culture. This suspicion, justified historically and by current experience, further separates these students from the experiences that could increase their chances for success in school. Black children who strive for school success through assimilation risk judgments of "acting white" and may have to pay for their success with a kind of "racelessness" caused by not being fully accepted by either blacks or whites (Ogbu).

Poverty

For more than a decade, children have constituted America's poorest age group. About one quarter of the children in our country younger than 18 are poor. During this same time the rate at which children became poor has increased, and we can expect this growth to continue (Orland). Poor children are roughly twice as likely as non-poor children to be low academic achievers. Educationally, the nation has responded to childhood poverty primarily with assistance through Chapter I of the Education Consolidation and Improvement Act and its predecessor program, Title I of the Elementary and Secondary Education Act. These programs have been well-received and helpful to poor children, though they have not been large enough to do much more than scratch the surface of the overall need.

To a significant degree, factors such as parental aspirations for their children, the amount of reading material in the home and family attitudes toward education account for much of the variation in student achievement (Orland). Poverty may be seen as a proxy for the lack of some of these home supports. Since home supports differ depending on the nature or duration of the family's poverty, educational interventions need to account for wide variations in the lives of poor children. In other words, not all poor children have the same problems in school or need the same help.

So strong are the influences of school cultures, however, that students in schools with high rates of poverty share similar characteristics as students personally experiencing long-term poverty. Probably several features of the school environment in high- and low-poverty schools contribute to differences in student achievement. Peer influences on student academic norms, available resources, the professional quality of teachers and administrators and the presence of such school characteristics as shared goals, high teacher expectations for student performance and strong levels of parent involvement are all likely to influence achievement. For whatever reason, students in schools with high concentrations of poverty are more likely to perform poorly in school than those with similar socioeconomic backgrounds who attend schools with lower rates of student poverty (Orland).

Many of the same students who experience long-term poverty also attend schools with high poverty concentrations. They are more likely to be black, from rural areas and reside in the South. These students experience both kinds of intense poverty, exacerbating their educational disadvantage.

Gender

Barriers to women's full economic and social participation are embedded in the larger society and reflect traditional role expectations. As women's permanent labor force participation has continued to increase, Congress and the courts have provided protection against employment discrimination on the basis of sex and have secured women's equal political protection.

Under Title IX, federal funding for educational programs is contingent on compliance with the rules and regulations implementing the legislation. The powerful post-Depression strategy of tying allocations of federal money to institutional commitment to public purposes helps elicit schools' cooperation in striving for gender equity in education.

Schools now offer girls and young women substantially more opportunity to participate in all sports programs. School districts can no longer expel students or prevent them from participating in school activities due to pregnancy. School counselors have begun to test and score all students' work using the same criteria and advise both girls and boys to pursue employment options that suit them instead of relying heavily on sex-stereotyped choices.

Nonetheless, men's and women's social roles continue to be inadequately addressed or misrepresented in educational materials and activities. For all the gender-fair examinations and adjustments that have occurred, sex-stereotyping and sexism remain evident in curriculum and instruction. Not only are males represented far more frequently in texts, tests and instructional examples, they are engaged in more challenging and interesting activities. Females are portrayed in more limited fashion, frequently in caregiving or homemaking roles.

Traditional role expectations continue to constrain all students' options and opportunities. Teachers, shaped by their own social experience, frequently play out past practices and prejudices in their work with both male and female students and treat students differently according to their sex. As a result of this differential student treatment and the organization of the school itself, significant differences in learning, achievement and opportunity are found between males and females at the conclusion of K-12 schooling (Keating).

Individual Vulnerability

Besides the social inequities inside schools associated with race, gender, and economic disadvantage, schools restrict the full access of disadvantaged students to real educational opportunity. Family disruption and divorce, family mobility and disconnection from school, models of dropping out at home and disability because of accident or illness, place children at risk of school failure. Alcohol and drug dependency, adolescent pregnancy and parenting responsibilities, personal pathologies and mental and physical illness or incapacity sometimes foreclose opportunities for full participation.

The interaction of vulnerable children with the content and structure of contemporary schooling often exacerbates the alienation and exclusion they already experience. Low grades, underachievement, truancy and disruptive classroom behaviors are the maladaptive responses of marginally engaged students (Sinclair; Richardson-Koehler and Colfer). These students' risk of school failure is magnified by the multiple dimensions of their disadvantages.

SCHOOL BARRIERS THAT FORECLOSE ACCESS TO QUALITY EDUCATION[4]

Broad legal requirements (e.g., Brown v. Board of Education, Title IX, Public Law 94-142) and specific compensatory efforts (Chapter 1) have not adequately insured the access of disadvantaged groups to the best possible educational opportunities. There are several reasons for this failure.

Legal efforts are typically slow and cautious, and compensatory efforts -- aside from small-scale successes such as Head Start -- have done little to alter the low levels of school support for children once they leave these programs or the type of support they experience outside of schools.

Stereotypes and prejudices die hard. Gender, race, poverty and individual disabilities continue to generate subtle and not-so-subtle barriers. Some help for disadvantaged children (e.g., bilingual education, school lunch programs, early child care, etc.) is opposed on political, ideological, pedagogical and economic grounds.

The very best educational opportunities are not widely available to *any* students, even those who are not at risk. Mainstream, middle-class youth may survive mediocre education, but children who are at risk of failure are the first to suffer the daily damage of schooling-as-usual.

Resistance to Reform

The current school reform emphasis on excellence offers an opportunity to focus on those aspects of schooling that limit learning and foreclose opportunity. Inappropriately narrow instructional activities, incomplete and unbalanced curricula and erroneous conceptions of individual differences and abilities must be corrected. For mainstream, middle-class youth, these are issues of excellence replacing mediocrity. For students at risk of school failure, they become matters of survival.

The nation needs to go beyond basic assurances of fair access to schools and school programs and expect more than equal access to mediocrity. Schools, themselves -- in their organization, in curriculum and instruction and in the professional preparation and work lives of educators -- limit the learning opportunities they profess to provide. Yet public pressures to maintain the status quo simply means more of the same. Despite reform rhetoric and some positive first steps, the nation's political and social climate consistently discourages meaningful reform, probably the most basic barrier to the access of disadvantaged individuals.

Four Schooling Barriers

If real reform is possible, where might one look to identify the most serious school problems and practices as candidates for fundamental change -- especially those that have the most damaging impact on disadvantaged youth?

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[4] John I. Goodlad, "Access to Knowledge", A Place Called School, New York: McGraw-Hill Company, 1984, pp. 130-166.

Testing practices, purporting to measure intelligence and ability so that curriculum and instruction can be tailored to individual differences, may actually limit learning opportunities.

Grouping and tracking practices limit disadvantaged students to the lowest-quality knowledge and the poorest-prepared teachers.

Curriculum and instruction practices are fragmented, emphasizing low-level skills and knowledge following narrowly behavioral, rather than cognitive, models of learning.

School management practices are centralized, top-down, factory production models which work against responsive and professional decision-making at school sites.

Assessing Intelligence and Ability

Insufficient understanding of intelligence and unfair distinctions based on the misuse of tests result in mislabeling, misclassifying and miseducating many students. Too often, educators are overly concerned with classifying students and, as a result, rarely use high-quality, informative assessments to shape instruction at the school and to guide policy decisions.

Popular views of intelligence and ability, as well as perceptions about the distribution of talent in the general population, influence educational practice. What seems fair and reasonable at the moment -- tests showing how students compare with others on global characteristics such as mathematics and verbal aptitude -- turns out systematically to limit some students' access to knowledge. For the most part, tests of intelligence, ability and achievement simply rank students separating and segregating them and sorting them for future social participation. Such tests are used to select some students for enriched educational opportunities and slate others for low-level participation. Forecasting failure for some students severely limits their subsequent opportunity in school and later life.

Popular perceptions that intelligence is both fixed and finite supports testing that purports to measure these immutable abilities. Once the tests identify and legitimize students' differences, students are provided with different school experiences. In contrast, current research in cognitive psychology challenges traditional forms and uses of mental measurement. The best evidence from this work reveals an abundance of cognitive processes that go unmeasured, that children learn to be intelligent, and that it is possible for schools to nurture mental growth and produce significant gains in the intellectual development of individual learners.

Assessments based on theories of cognition -- learning and thinking processes -- look at how students are functioning mentally, rather than at the product of that functioning -- e.g., an I.Q. score. This distinction is significant because assessments that provide an understanding of how students make sense of instruction and that diagnose learning difficulties can enable educators to design instruction to help students develop higher levels of understanding and intelligence.

But because educators typically do not accept the idea that intelligence is complex, multidimensional and changeable, they have not rethought outmoded conceptions of the role of schooling in developing human potential. Few see the possibility of all students becoming persons capable of using knowledge in complex thinking and problem solving in a social context. Because they usually focus on how much fixed potential students have, educators are not primarily concerned with how to nurture and develop students' intelligence and ability (Sirotnik). Because they typically do not consider how regularly traditional tests are abused, they fail to apply the most reasonable and useful standards for their use: What can be learned to improve the value of schooling for each student? (Hilliard).

A regrettable side-effect of the widespread misunderstanding of testing and its uses is the current reliance on standardized, norm-referenced tests for judging school quality. It is simplistic to think that students' scores on a set of multiple-choice test items provide very much useful information about the quality of their school experiences (Sirotnik). Certainly these test scores reveal something about what students have learned, but because much of the variance in scores can be accounted for by individual students' family background, they say little about overall school quality. Unfortunately, not only the accomplishment of students, but also the goodness of schools, school districts, states and the nation as a whole are being judged by narrow bands of scores on standardized tests. While tests have the potential to provide useful information, they can also distract policy makers from the real business before them -- supporting necessary changes in how schooling is conducted.

Grouping and Tracking Practices

Testing individual aptitudes is the foundation for school practices that identify individual *differences* in order to determine which students get what instruction. Tracking practices begin with the assumptions that differences among students diminish instructional effectiveness, and that students can be assigned fairly and accurately to intellectually homogeneous groups for instruction. This systematic separation of students begins early in their education and forecloses opportunities for enriched coursework for many students. By the secondary level, tracking placements sort students for school opportunities and subsequent social roles.

Children assigned to low-ability classes are taught different, less socially valued knowledge and skills. Emphasis is placed on rote learning, workbooks, kits and easy material. Regardless of ability or motivation, these students' academic mobility is constrained. They stand little chance for an improved school placement because those in low-track classes are usually denied access to the knowledge necessary to participate in more rigorous and interesting work (Oakes and Lipton).

Moreover, teachers in low-ability classes tend to be overly concerned with getting students to be punctual, sit quietly and follow directions. They are often seen as less concerned and more punitive. Discipline, class routines and student socializing cut into the classwork of low-ability groups, further eroding these students' opportunities for an education of value.

By contrast, teachers in high-ability classes more often encourage critical thinking and independent questioning. They are more enthusiastic, better organized and make lessons clearer. Students in these advanced groups typically spend more time on learning activities and homework. Nearly all students can indeed benefit from enriched learning opportunities and high-quality experiences in literature, languages, science and mathematics. But sorting practices regularly exclude students from classes with high-quality instruction.

Students who are poor or members of racial minority groups, especially black and Hispanic youth, are more frequently placed in low-ability, non-college-bound tracks. Black and Hispanic students are more often assigned to vocational programs, training for low-level occupations; they are seldom admitted to programs for gifted and talented students. Younger children who are initially similar in background and achievement become increasingly different both in their achievement and expectations as a result of their group placements. These differences accumulate until they become quite pronounced in high school (Oakes and Lipton).

Tracking and the myths and misinformation that support these grouping practices constitute a severe barrier to equal opportunity in education. The quality of the curriculum and instruction for the high-ability group and the resources that support advance-track students also work well for lower-ability students. While many studies describe students' progress in mixed-ability groups, those not in the top groups or tracks suffer clear and consistent disadvantages from their academic placements. Tracking often seems to retard the educational progress of students identified as average or slow. Assignment to low tracks can lower student aspiration and self-esteem and negatively affect attitudes toward school. Sadly, those children who need more time to learn appear to receive less. Those who have the most difficulty succeeding in school have fewer of the best teachers. Those who stand to benefit from classrooms with rich resources (motivated teachers, successful classmates, enriched curricula) nearly always get the least (Oakes and Lipton).

Curriculum and Instruction

Differences in the knowledge available to students in separate groups and tracks reveal serious inequities in education. But the curriculum and instructional strategies that are common across all tracks are often mediocre even for average and above-average students. These practices also deserve scrutiny, with particular attention paid to their implications for the educational access of students at risk.

Telling and lecturing, along with monitoring seat work, dominate classroom teaching. But a much larger variety of instructional modes and activities is possible and necessary to teach all students. Unfortunately, teachers either lack the skills or do not feel inclined or empowered to implement a more varied repertoire of teaching techniques: coaching, demonstrating, tutoring, symbolically representing, role playing -- all in addition to lecturing. Skillfully varying teaching techniques and individualizing instruction are essential strategies to meet the range of aptitudes and differences encountered in classrooms. While most teachers reject the notion that students are passive receptacles for the teacher's knowledge, they, nonetheless, conduct class as if it were an accurate image for instruction (Goodlad).

Of course, instruction and curriculum follow from educators' and policymakers' conceptions of how children learn and what it means to be educated. When instruction and curriculum are shaped by knowledge of children's cognitive processes, lessons will be rich with meaning and more easily mastered and remembered by students. Such study features large-scale assignments, problem-solving approaches to knowledge, classics of literature, and activities in democratic participation. Enriched learning is not common in schools, and where it exists, too often it is only the already advantaged students who benefit. At-risk students are more likely to have lessons that are shaped by a behavioral or training perspective: lower-level skills, fragmented knowledge, or easily tested facts.

Educators have too few opportunities to examine and assess what, specifically, is worth knowing, and therefore, worth teaching. Few teachers are engaged in building the core curricula that could, but seldom does, capture the best ideas and methods we can identify (Goodlad).

Fragmented coursework, rather than integrated learning, is a particular burden for less capable students. "Spot" remediating by specialists can remove students from ongoing activities and cause them to miss essential core curricular experiences with their peers. Students are too often pulled out of class to struggle with a different curriculum, rather than receiving the help that would support their success in a regular class. Low achievers are expected to synthesize various learnings into coherent patterns without benefit of the support and attachment associated with teachers and students immersed in the central curriculum activities of the school (Soo Hoo).

In many schools, classroom teachers are charged with orchestrating multiple programs (speech and hearing, remedial reading, etc.). These programs have little substantive connection to the central classroom curriculum and, because they rely heavily on specialists, little relationship to the teacher's frame of reference. Where formerly classroom teachers tried to accommodate students' diverse needs, many are now unwilling or unable to respond to variability in student capacity and achievement. With specialists shouldering the responsibilities for students who do not respond to standard instruction, many teachers no longer see it as their responsibility to meet a range of student need; nor do they find incentives or possess the skills to respond to variability in student capacity and achievement. They simply seek referrals to special programs for those students who do not fit the curriculum (Soo Hoo).

Organization and Administration

School organization and administration are frequently rigidly bureaucratic, frustrating genuine access to knowledge. Hierarchical, inflexible, top-down management supports the status quo in schools and limits reform.

Administratively, schools are modeled after corporate organization as it developed from the industrial period of the early part of this century. Schools are typically organized like little factories, turning out recognizably similar "products" over time. Administrators are trained in business management methods and often identify with businessmen. Efficient management is often more important than creative educational leadership. This perspective distances school leaders from the process of making knowledge accessible to children.

School organization and administration are better suited to the kinds of knowledge and skills included in schooling at the turn of the century. The factory model of schooling is characterized by lock-step learning, chopped up in discrete blocks of time, and narrow notions of performance. Disconnected coursework, a lack of coherence in core subjects and a narrow approach to learning focusing on limited objectives, cheapens and relativizes knowledge, giving little guidance to students who seek to integrate ideas and connect what they learn at school to the rest of their lives. This common pattern of school organization and administrative practices benefits some students more than others.

To equalize access for all students is to question the organization of the school itself. Few of today's school managers are prepared to provide leadership in questioning and re-shaping the organizations they direct. There are seldom incentives or rewards for changing the structure or content of schooling.

Administrators succeed professionally by improving the efficiency of the operation as a whole. In this environment, management practices and instructional accountability support curriculum and instruction that reduces knowledge to smaller and smaller units for mastery. In the interests of narrow and efficient accountability, many administrators seek safe and simple measures of success and rarely take thoughtful or bold action. Those in charge often show a keen interest in budgets, buildings and buses, but less often evidence care for the curriculum and instruction that is the central activity of schooling or give sustained thought to the integration of information and the construction of meaning from diverse knowledge and perspectives. (Wilson and Wright).

Not surprisingly, opportunities for teacher-led innovation in school structures and programs are rare. Teachers who deviate from rigid instructional norms are usually suspect, and administrators, trained to see themselves as "in charge," rarely initiate the inquiry processes that are necessary catalysts for change and innovation. Teachers, in response, either conform to conventional practice or risk rebuffs or removal. Inside most schools, administrative preference and practice reward teachers for maintaining order and discipline, keeping students out of the hallways and quietly isolated in traditional classrooms.

Teachers are seen as skilled workers who have little control over resources, program organization, content and methods. This bureaucratic structure, maintained partly by the feminization of teaching, helps keep teaching from developing as a profession characterized by knowledge-based decisionmaking about learning and instruction. Not surprisingly, with other opportunities available to women, we currently face a shortage of *qualified teachers* -- with the most critical shortages in schools serving the most disadvantaged children. Moreover, currently inadequate teacher education programs, low pay and unattractive working conditions dominated by overregulation and standardization are unlikely to attract, prepare, empower or retain a cadre of teachers committed and able to help all students learn (Darling-Hammond).

Consequently, bureaucratic school organization and top-down management structures, especially in larger, urban districts, frustrate attempts to make schools responsive to changing individual and national needs, as well as sensitive to new knowledge. Rigid structures rarely have sensing mechanisms for detecting the educational implications of changes in the surrounding society, for example, increasing populations of students at risk of school failure. Moreover, there is little chance that schools in their current organizational form can adjust adequately to the changing social and economic conditions of students (Wilson and Wright).

Expectations for smooth operation, the predictability that characterize school and district procedures and behavioral expectations inside schools all make it difficult for school leaders to promote the kinds of learning that enhance social and economic development (Wilson and Wright).

It is ironic, for example, that many schools and districts are now buying packaged instruction in "critical thinking," taught in some instances by outside specialists, as if thoughtful analysis is an add-on. What these packages communicate is emblematic of the mixed messages schools send -- "Think critically, but do it in an orderly, prescribed way." Genuine, empowering inquiry to prepare students for an information-dominated society is still only an abstract concept, rarely found in schools. And, unless teachers and administrators participate in real inquiry themselves, it is unlikely ever to penetrate the school curriculum (Sirotnik).

Standardization is still preferred over innovation, efficiency counts more than excellence, and conformity to traditional, majoritarian assumptions and expectations about education is more valuable than creativity and innovation. Under these conditions, administrators and teachers are reduced to tinkering around the edges of educational practice rather than responding thoughtfully to individual differences and social change.

POLICY OPTIONS FOR STATES AND DISTRICTS

The foregoing discussion illustrates two important points: First, much of what schools are doing now leads to minimal successes with those students most at risk of school failure. Second, educators know, at a minimum, what else needs to be done. Commonly accepted school structures and practices -- supported by outmoded traditions and erroneous assumptions -- constitute institutional barriers to all students' learning, and they erect nearly insurmountable obstacles to those students most affected by social and economic disadvantage. We are unlikely to break down these barriers simply by adding new legislative or judicial mandates or developing categorical programs targeted at students at-risk of school failure (although these provide some relief).

If states and local schools hope to circumvent the dismal outcomes current conditions now portend, school barriers to equal access will need to be removed by fundamentally new policy initiatives. While basic alterations in the distribution of schooling opportunities and outcomes may appear radical, the necessary policy actions fall well within the traditional role of the states in overseeing education.

In the short term, new policies can alter current state and local regulations that limit access, create incentives for schools to change, marshal the resources and technical assistance that will enable schools to improve and generate public commitment to change. To the extent that deeply entrenched and unquestioned fundamental features of schooling limit students' learning, policy makers and educators must work together over the long term to eliminate barriers and assure educational equity to all students. The following policy approaches illustrate both these short- and long-term goals:

- **Place equal educational access high on the public policy agenda.**

Schools probably suffer more from the lack of public will than educational know-how. But as the recent successes of the federal education "bully-pulpit" clearly demonstrate, policy makers can be very effective in shaping public priorities. State and local policy makers can report information that helps identify real needs and build an appropriate reform agenda. The facts about school barriers can be startling enough to mobilize concern in necessary directions. Some state education agencies and local districts, for example, have begun to publicize the racial breakdowns of student enrollments in various courses and curriculum tracks -- data that point clearly to the differential access of minority students to advanced academic coursework.

This information, accompanied by calls for increasing the access of minority students to college-preparatory programs, can help catalyze needed changes in grouping and tracking practices. However, the strongest message will be sent if policy initiatives combine rhetoric with a call for increased resources -- funds targeted specifically at enabling schools to alter structures and attitudes that are barriers to all children's learning.

- **Eliminate remaining vestiges of race and gender bias in schooling practices and curriculum materials.**

Perhaps the most striking bias in schools is the restricted access of poor, racial minority students to rigorous academic work. Policies can ensure that schools enrolling large proportions of these students offer coursework that will prepare them for access to and success in colleges and universities (physics and calculus courses, for example). In schools with mixed student bodies, policies can prompt procedures that provide minority students access to high-level curriculum and programs for gifted and talented students.

State education departments can exercise considerable leverage over the content of textbooks and actively work to eliminate biased instructional materials that misrepresent the lives of many Americans and miseducate children about the reality of diverse values and experiences. Textbook-approval committees and curriculum task forces can weed out those texts and materials that give little significant attention to the experiences of women and racial minorities.

In subjects such as science and mathematics where the bulk of teachers' time, interactions and encouragement is often allocated to white males, technical assistance can be provided to help teachers recognize and rectify this often unintentional bias. Additionally, deliberate efforts can be made to reverse the traditional recruiting and selection practices that have prevented women from obtaining administrative positions in schools with decision making responsibility or supervisory authority (Keating).

- **Upgrade teaching and increase the access of disadvantaged students to highly qualified teachers.**

Rigorous teacher education programs that improve the overall quality of the field and substantial changes in working conditions and rewards for teachers will help solve the pressing problems of teacher supply and quality (Darling-Hammond; Hodge). Equally important, policies must also provide incentives to attract and retain high-quality teachers in schools with the most disadvantaged populations.

Policies should be developed to alter the prevalent practice of assigning the most qualified teachers to schools and classes that serve the most advantaged students. Undoubtedly, such changes will require the participation and cooperation of teacher unions because these practices are likely to preclude teacher choice of initial assignments and eliminate teacher transfer rights based on seniority. Furthermore, policy makers can proceed with the assumption that teachers have a deep commitment to helping the disadvantaged if they feel that their personal and professional well-being is not jeopardized.

Creative new teacher assignment policies can also create incentives for highly skilled teachers to teach in heavily impacted schools. For example, policy makers might begin by upgrading the quality of teachers' worklives and provide special teaching opportunities in the most needy schools. Such incentives could include extra compensation for developing new school programs and instructional strategies in these settings, or for mentoring new entrants to schools serving disadvantaged students. Other incentives might be lower student-teacher ratios, less instructional and more planning time and the availability of enhanced facilities and special equipment and materials.

- **Alter formulas for compensatory educational resources and services to account for the impact of the longevity and high rates of poverty in schools.**

The clear association of the length of time children have suffered poverty and their academic achievement provides new insights for developing more effective policies to allocate special resources for remediation and extra academic supports. So, too, do data showing that poor students who attend schools with high rates of poverty have greater academic difficulty than do poor students attending schools with more affluent peers.

Because students who have experienced poverty the longest appear to be concentrated at the same schools, compensatory funds could be targeted most productively at schools with the highest concentrations of poverty.

Moreover, because the school-level characteristic of poverty rate seems to depress achievement beyond that of the poverty level of the individual child, compensatory programs may also be far more effective if they are school based, rather than student based. In short, compensatory programs can target resources and special expertise at improving the school as a whole, rather than by focusing on individual children (Orland). This policy direction is consistent with research that suggests that policy makers view the individual school as the primary unit of change.

- **Eliminate rewards for assessing and labeling students on the basis of social and/or personal predispositions.**

In most states and districts, special programs targeted at providing special assistance to students at risk of school failure require the labeling and sorting of these children into separate "pull-out" programs so that schools can be held accountable for extra funds. Often, such labeling and sorting is based on standardized intelligence or achievement tests. Unfortunately, such policies have the unintended effect of identifying intractable social or personal characteristics of children as the source of the problem, not the more easily alterable school practices that collide with their personal and social attributes.

Moreover, testing practices often create or sustain erroneous assumptions about the learning potential of students who are members of high-risk groups, such as racial minorities and those who are economically disadvantaged (Sirotnik; Hilliard). Removing labeling and accountability based on individual student performance can also help eliminate the bureaucratic requirements that gobble up teacher and administrative time with recordkeeping, budgeting and other paperwork that does not translate into improved instruction.

Instead, effective policies for ameliorating the disadvantages of students at risk of school failure should provide resources and technical assistance aimed at altering the social and instructional context of schools and classrooms -- and thus avoid identifying and labeling students. One strategy at the elementary level would be to require that specialists be integrated into the regular classroom and, together with regular classroom teachers, develop curriculum and instructional strategies to accommodate the needs of diverse groups of children.

Such an effort would not depend on labeling children as deficient, but simply identify schools with high rates of children from high-risk groups. For older children, shifting departmentalized junior highs to a middle school organizational pattern -- featuring teams of teachers responsible for diverse groups of students -- could promote an environment more caring and tolerant of individual and social differences (Richardson-Koehler and Colfer).

Since assessments of students' cognitive functioning are needed to diagnose particular problems and guide specific remedial efforts, policies can direct educators to use assessment tools that provide information about particular aspects of mental functioning and lead to specific instructional strategies to overcome weaknesses. Policies ought to discourage the use of traditional measures of intelligence that give educators little more than labels that follow children throughout school (Hilliard).

- **Develop model, integrated curricula and instructional strategies suitable for diverse groups of students.**

To succeed in school, all students -- especially disadvantaged students -- require access to a rigorous curriculum and challenging instruction. But they also need a supportive school culture that encourages them to stay in school and attempt to do well there. The most promising policies are those that attempt to create the conditions that help all children succeed -- organizational structures, instructional practices and relationships that provide them with evidence that they are capable of success and that school success is worth having (Comer).

Reform strategies must allow for the differences among children without consigning some to separate, inferior or low-status learning experiences (Soo Hoo). Popular tracking practices, ability groupings and pull-out programs that segregate students and restrict some students' access to knowledge are unfair and must be replaced with more flexible organizational patterns that accommodate individual differences in the same classrooms (Oakes and Lipton).

Educators must be helped to develop a core of learning for everyone and insist that this common curriculum take full account of individuality and cultural heterogeneity. Further, schools must incorporate new knowledge about race and gender into educational materials and teaching practices. For example, considerable evidence suggests that black and Hispanic students learn best in cooperative rather than competitive situations and that these strategies do not disadvantage others. States can develop model curricular frameworks to help inform local schools about these and other effective practices.

- **Provide incentives for schools to forge non traditional alliances among schools, families and communities.**

Many schools are currently establishing adult and peer tutoring programs to provide extra academic supports for students and others are initiating programs where teachers work with parents so they can provide instruction at home and in the classroom. Such efforts have increased student achievement.

However, more profound results can be expected if districts establish management policies that integrate the involvement of parents and students (as well as school and community professionals) into the ongoing work of the school. This community collaboration promises to create empowered parent involvement that translates into success for even the most disadvantaged children and instills greater confidence and competence for parents. Policies that facilitate cooperative interactions among all the players create an ethos in which parents feel welcome and needed at school (Comer).

While school leadership teams must operate within state and district guidelines and in concert with local authority, they can effectively coordinate school governance, develop comprehensive plans to achieve school goals and create staff development opportunities. States can provide incentives for leadership development by allocating special resources to support such school-based planning teams.

- **Join forces with all those who have a stake in schools -- universities, social service agencies, the private sector.**

Schools should probably concentrate their limited resources and technical capacity, on educational opportunities and outcomes. Yet public policy must also provide for disadvantaged children's extra-educational needs -- nutrition, health, and employability. Schools should help students avoid teenage pregnancy, gang activity, substance abuse and crime. Educational efforts in these areas ought to elicit the participation and support of relevant government agencies, community groups and business interests. Forging such coalitions can generate greater resources for urban children and youth and result in increased political support for schooling.

Businesses' most promising contribution is providing a real-world experience on which disadvantaged youth can build hope for a future enhanced by education. Meaningful part-time and summer work and on-the-job training help students immediately and hold promise for the future. States and cities might want to consider incentives that ensure that partnership activities are perceived as serving business as well as schools. University-school partnerships can help create more effective organizational structures and instructional programs across the educational continuum (Hodge).

But policies establishing university-school partnerships should be made jointly between districts and university administration and include provisions for rewarding faculty participation within the university career advancement structure, as well as provide services to schools. State and local policies might clearly assign responsibility for health, substance abuse, crime prevention and other support programs to cooperating community agencies.

- **De-regulate schools and build capacity for improvement.**

Mounting evidence about effective school improvement and change makes clear that schools must be reorganized and renewed individually (Goodlad). New policies must remove disincentives to teacher professionalism and the development of high-quality shared educational programs for all children that flow currently from over-regulation and standardization of school organization, content, instructional processes and teacher evaluation. State and district policies should support site-based planning and program development. Policies can shift state and central-office administration away from mandating procedures toward building local-school capacity -- with time, material resources, central-office support and technical assistance, ongoing staff development opportunities at the site level and permission to redesign the system.

Policies can be framed that provide assistance for collaborative school restructuring, providing processes for shared leadership, communication, planning and implementation (Wilson and Wright). District office administrators can negotiate with unions to create enabling conditions for change, forging policies that insure staff stability and providing an established professional voice in school improvement plans. Such negotiations can smooth the way for teacher participation beyond what is specified in union contracts.

An essential part of capacity building lies in providing educators with access to information about what goes on within their own schools and classrooms: what courses are offered and who teaches and takes them, how classroom time is spent, how learning activities are organized, what curriculum materials are in use, what attitudes prevail, and so forth. Such information can be the starting point for school-based deliberations about what practices support or inhibit equitable student access and outcomes (Sirotnik).

- **Hold schools accountable for both equity and learning.**

Policies that deregulate school programs and focus on capacity building cannot abandon states', local school boards' or district administrators' responsibilities for educational oversight. Policy makers can set targets for improvement and establish clear accountability mechanisms for equitable access and improved outcomes. States and districts can also mandate that equity be monitored by disaggregating indicator data by race, social class, gender and handicap.

Policy makers need to develop new modes of accountability appropriate for restructuring schools, however, they must develop more thoughtful means of assessing student progress designed to improve performance. They must recognize the limitations and misuses of current measures of school success and acknowledge how these data determine or depress opportunity for some students. States and districts must avoid overreliance on the results of nationally normed standardized tests and, instead, invest in more valuable indicators of school quality and student performance, for example, measures of the effectiveness of a school's efforts to be more responsive to families and the community and indices of a common curriculum and how it is responsive to students' individual differences. Most effective will be policies that allow schools, districts and states to negotiate specific local goals and indicators of improvement.

- **Marshal new resources and reconfigure existing ones.**

Breaking down barriers to access requires some new resources, though some costs can be absorbed by reordering priorities and reconfiguring existing programs. Schools need greater autonomy and flexibility to support teachers' efforts to create rich curricula and challenging learning tasks. Districts can provide time and technical assistance to local schools as well as shift existing staff development funds and expertise currently concentrated at the district level to individual schools. The cost of other policies such as high-quality early childhood programs or school-based health care -- might be met by schools joining forces with social service agencies, universities and businesses.

Short- and Long-Term Policy Effects

Each of these policy directions promises to begin chipping away at the school barriers that inhibit children's learning. Most are supported by evidence of educational effectiveness; many are feasible given current resources and technical expertise, and some will be met with little resistance. Understandably, policy makers are interested in practical strategies that are cost-effective and produce quick changes, those with the most "bang for the buck." And, indeed, the public has a right to see improvement after approving changes and spending money.

It would be misleading, however, to expect short-term policy changes to effect the essential restructuring of schools that this paper argues is necessary, and one must be realistic about time frames. The fundamental changes required for breaking down school barriers that limit children's learning will require sustained effort over the long term. Five, 10, or more years may be necessary before basic changes will pay off in significantly greater access to knowledge through improved teacher education, higher-quality teaching, significant alterations in school organization and classroom practices, or dramatic changes in dropout rates or minority enrollments in universities.

The policy issues discussed here are intended to stimulate both short-term actions and a longer-term dialogue in state houses, university departments of education, local school districts and local communities about fundamentally different solutions to an old, but increasingly serious, educational and social problem -- inequitable schooling in a democratic society.

Segment 2

RESTRUCTURING RESPONSES TO LITERACY AND LEARNING DIFFICULTIES

Richard Allington and Linda Winfield

Outline
Trajectory Graphic
Visuals
Readings
References

FOR NOTE TAKING

ALLINGTON/WINFIELD OUTLINE

Part 1

The Current Situation

Opportunity to Learn

Time

Task

Teach

Impact of Belief Systems

Tutors

General Contractors

Custodians

Referral Agents

FOR NOTE TAKING

ALLINGTON/WINFIELD OUTLINE

Part 2

Rethinking Responses to Literacy Learning Difficulty

Ineffective Approaches

- *Retention*

- *Transition*

- *Traditional Remediation and Special Education*

Access to Quality Instruction

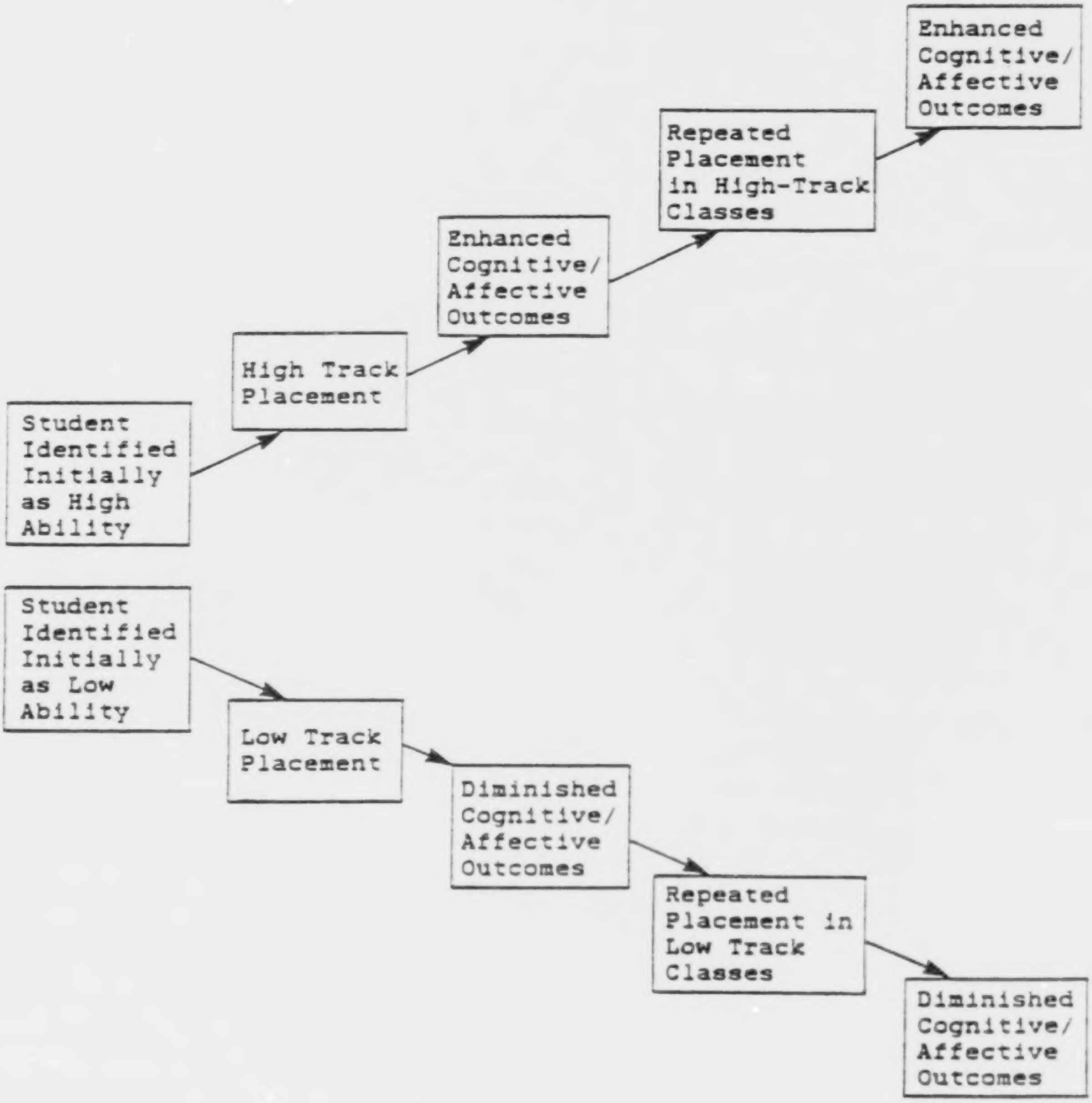
- *More Instruction*

- *Better Instruction*

Examples of Revised Literacy Programs

- *Within Classrooms*

- *Between Classrooms*


Student Identified Initially as High Ability
High Track Placement
Enhanced Cognitive/ Affective Outcomes
Repeated Placement in High-Track Classes
Enhanced Cognitive/ Affective Outcomes
Student Identified Initially as Low Ability
Low Track Placement
Diminished Cognitive/ Affective Outcomes
Repeated Placement in Low Track Classes
Diminished Cognitive/ Affective Outcomes

Trajectory Graphic

The Consequences of the Tracking Cycle

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VISUAL #1

Opportunity to Learn

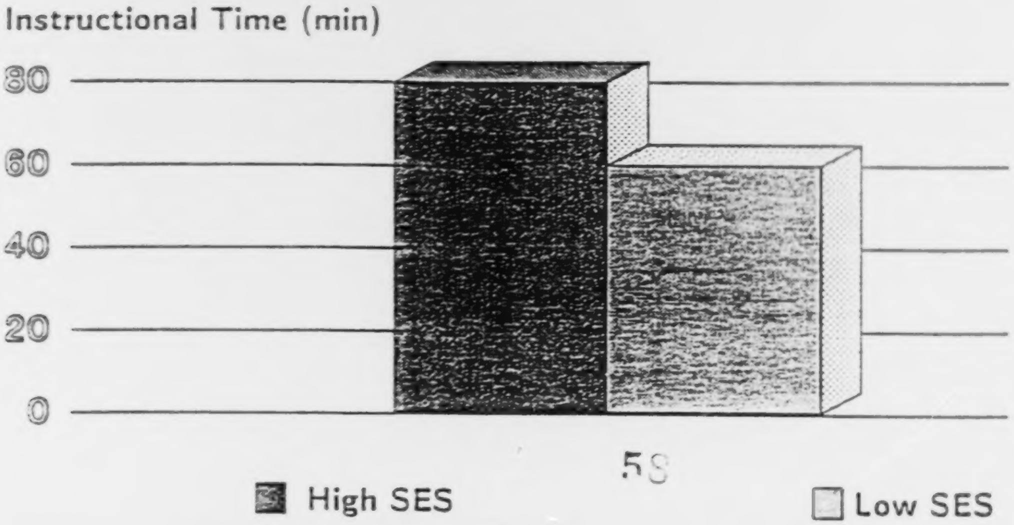
Time

Tasks

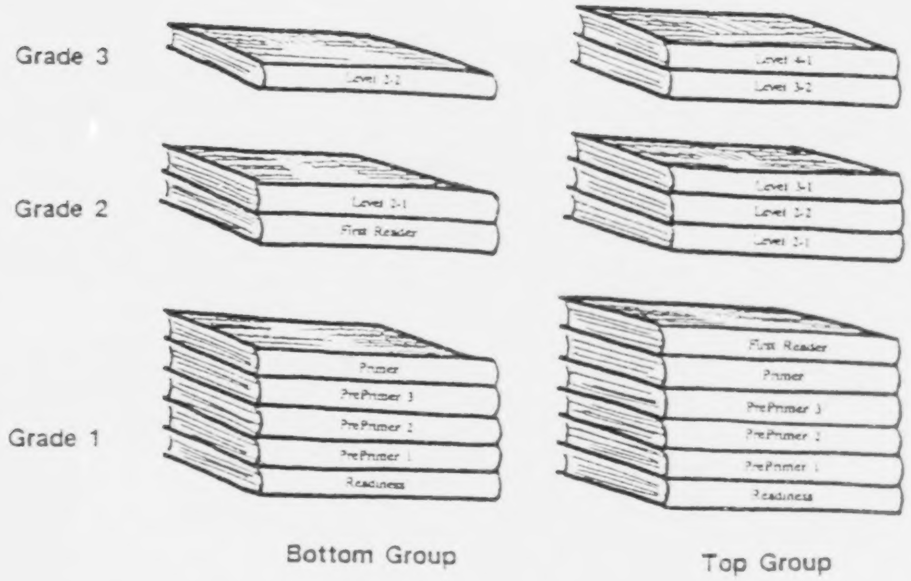
Teach

VISUAL #2

Daily Reading Instructional Time and Student Socioeconomic Status

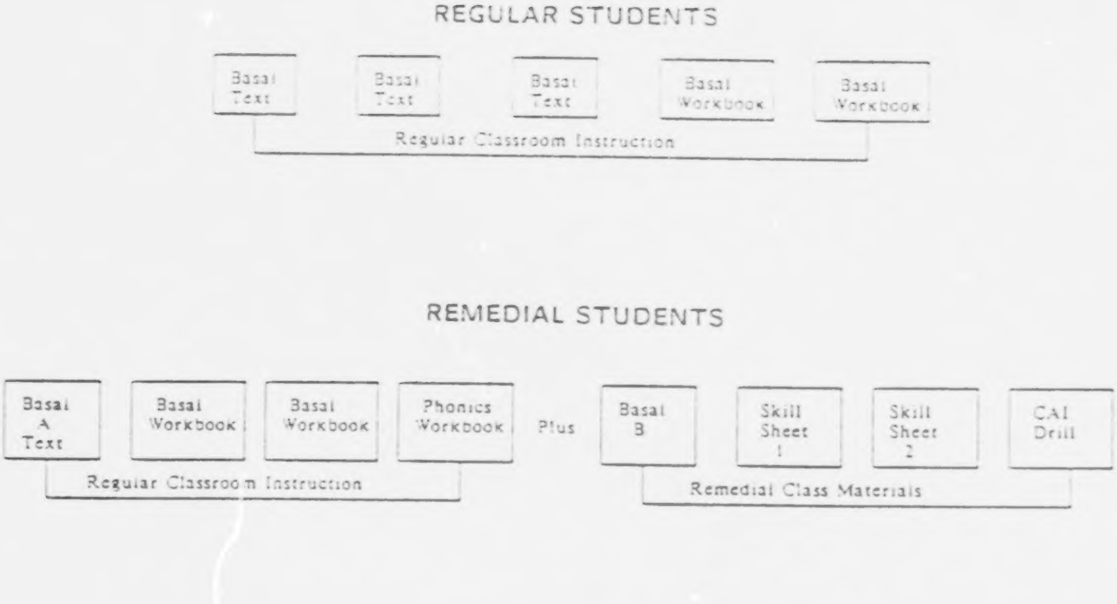


VISUAL #3


Grade 3
Level 2-2
Level 4-1
Level 3-2
Grade 2
Level 2-1
First Reader
Level 3-1
Level 2-2
Level 2-1
Grade 1
Primer
PrePrimer 3
PrePrimer 2
PrePrimer 1
Readiness
First Reader
Primer
PrePrimer 3
PrePrimer 2
PrePrimer 1
Readiness
Bottom Group
Top Group

Reading Curriculum Completed grades 1-3

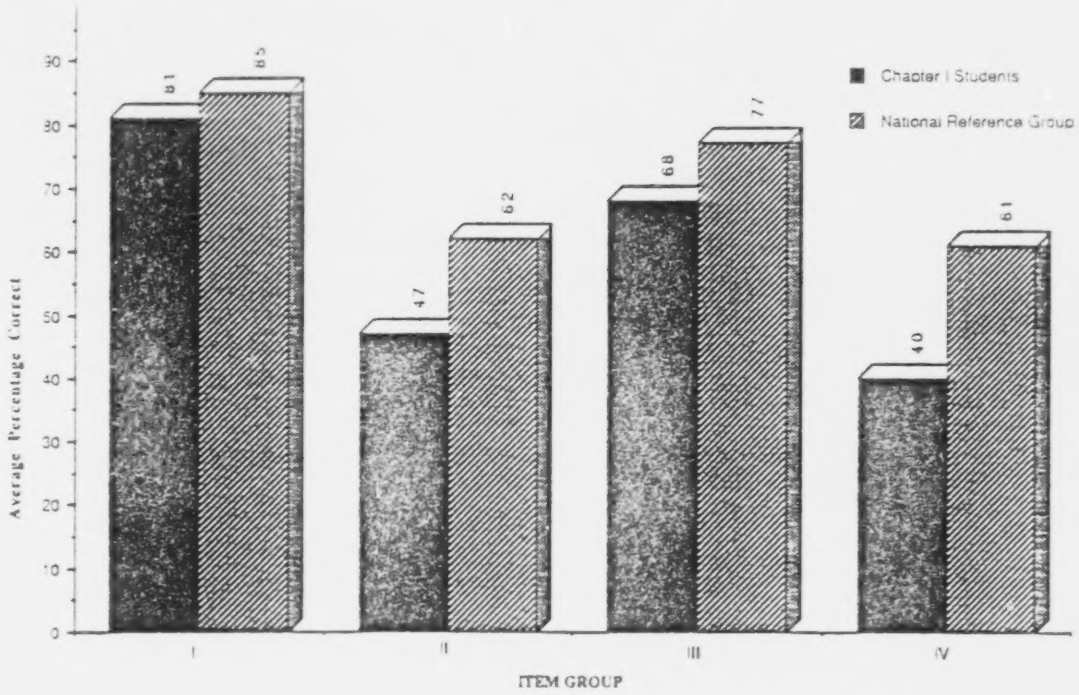
VISUAL #4


REGULAR STUDENTS
Basal Text
Basal Text
Basal Text
Basal Workbook
Basal Workbook
Regular Classroom Instruction
REMEDIAL STUDENTS
Basal A Text
Basal Workbook
Basal Workbook
Phonics Workbook
Plus
Basal B
Skill Sheet 1
Skill Sheet 2
CAI Drill
Regular Classroom Instruction
Remedial Class Materials

VARIETY OF DAILY READING CURRICULUM MATERIALS

59

VISUAL #5



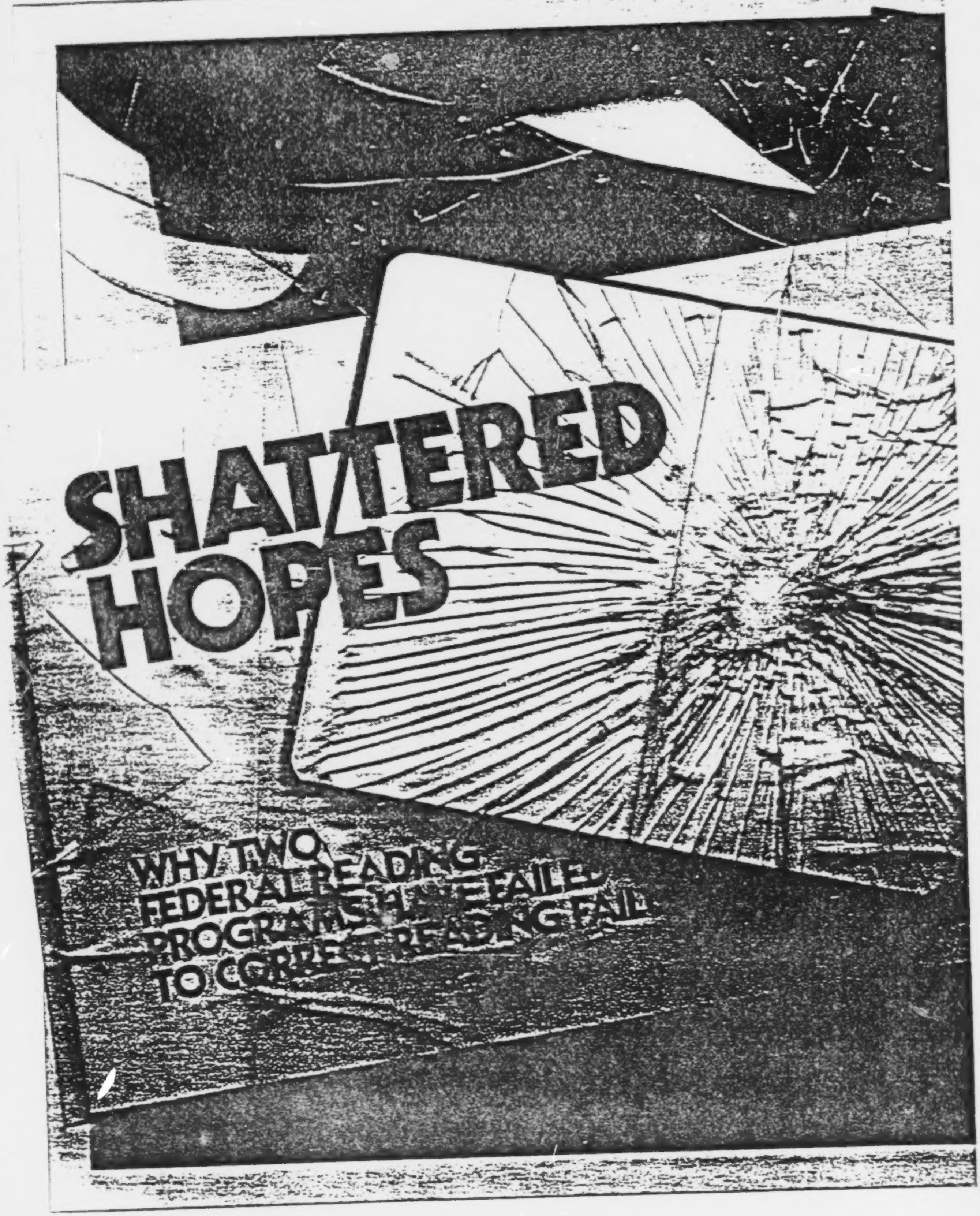
Chapter I and National Reference Group average percentage correct scores in reading by test content coverage in first-grade reading

VISUAL #6

BEHAVIORS TOWARD ACADEMICALLY AT-RISK STUDENTS

BELIEFS ABOUT ACADEMICALLY AT-RISK STUDENTS	*Assume Responsibility*	*Shift Responsibility*
Improvement	1. TUTORS	2. GENERAL CONTRACTORS
Maintenance	3. CUSTODIANS	4. REFERRAL AGENTS

FIG. 1. Cross-classification matrix of teachers' beliefs. Reprinted with permission from The Urban Review, Vol. 18., No. 4



SHATTERED HOPES

WHY TWO FEDERAL READING PROGRAMS HAVE FAILED TO CORRECT READING FAIL

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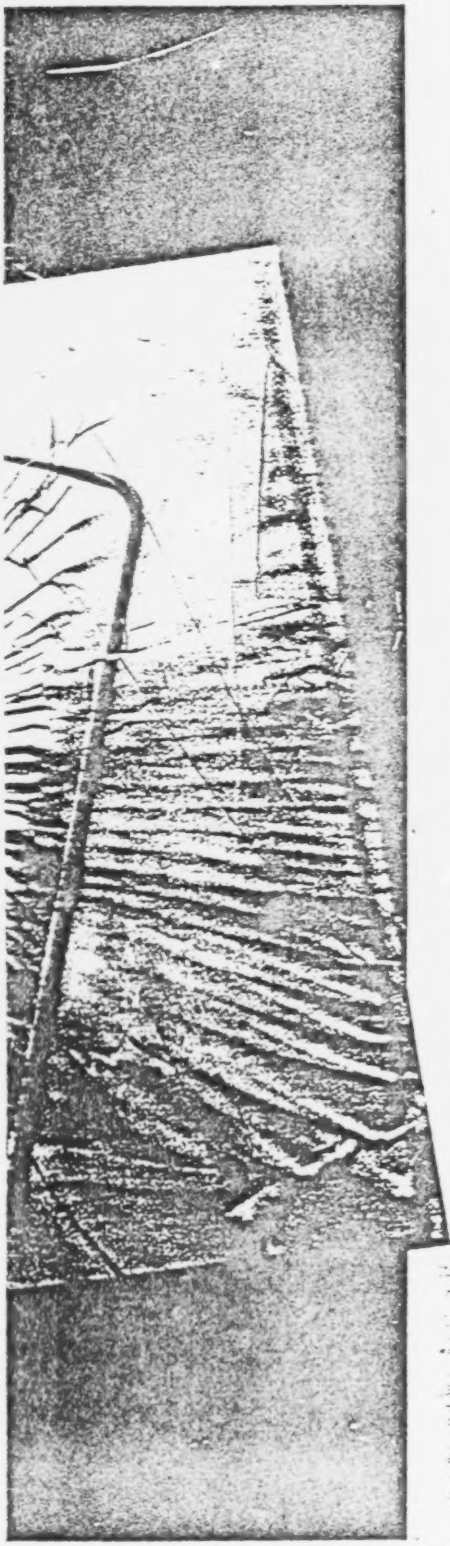

More than 5 years of research shows little evidence that students who attend federally funded remedial or LD reading programs improve their reading skills. And the fault, says this researcher and former Chapter 1 director, lies not with the teachers or the students, but with the programs themselves.

BY RICHARD L. ALLINGTON

AMONG THE HUNDREDS of classrooms around the country that my researchers and I visited, one experience stands out as a worst-case example of the contrast between what happens to pull-out students and what happens to students who stay in the regular classroom. Here's what we saw:

The remedial and learning disabled students left their classroom to go to the "resource room" down the hall. There they spent half an hour bent over dull workbook and purple ditto pages. They filled in blanks, circled hidden words, and tried to make BINGO with phonic sounds—lifeless, meaningless activities that don't relate to reading success.

On the other hand, the children who stayed in the regular classroom did shared book-reading of Gertrude Warner's *The Boxcar Children*. First they heard their classroom teacher read from this wonderful story, then they discussed it, then read it themselves—an activity proven to be a powerful technique for producing reading achievement.

This kind of disparity didn't exist 20 years ago because there *was* no special help for poor readers. Back then, most educators assumed that students who couldn't learn to read were simply incapable or didn't attend school often enough. But today, virtually every school offers federally funded supplementary reading programs—under the auspices of either Chapter 1 of the Education Consolidation and Improvement Act of 1981 or the Education for All Handicapped Children Act of 1975 (Public Law 94-142).

These programs began with high hopes. Tremendous amounts of time and money have since been expended on them. School districts embraced them—and the funds that came with them—as *the* way to solve reading problems. But the question must be asked: How much evidence is there that children have their reading failure alleviated by participating in these intervention programs? The answer is: very little.

After spending over 5 years with a team of researchers observing, reviewing, and evaluating the two programs, I've come to the conclusion that the need to comply with various mandates, regulations, and procedures has caused us to forget the purpose of our efforts: to help children overcome reading failure. We've allowed auditors and bureaucrats to design the programs to suit their reporting needs—not the reading needs of the children we wanted to help.

What's wrong

Three false assumptions underlie the reasons Chapter 1 and Public Law 94-142 have not succeeded at stemming reading failure.

- ***False Assumption 1: The two supplementary programs serve students who have different kinds of reading problems.***

The very existence of the two large programs implies that the students they serve fit into two categories. Yet not a shred of evidence supports this assumption. In fact, research at the University of Minnesota clearly shows that groups of remedial students (served under Chapter 1) and learning disabled (LD) students (served under Public Law 94-142) cannot be differentiated from each other in terms of educational achievement or aptitude. Still, because of complicated bureaucratic identification procedures, students who are failing at reading find themselves enrolled in one of two different programs, each with differently trained specialty teachers—reading specialists and learning disabilities teachers—and different sets of teaching practices.

Though professional qualifications for both programs vary widely from state to state, the reading teacher and the LD teacher typically have little common training. Few graduate programs for reading specialists require any preparation in special ed, and few programs for LD teachers require courses in reading theory or pedagogy. Instead there are two distinct professional camps, each with its own journal, professional organization, training, and certification requirements.

The two programs do have one thing in common: Neither camp generally offers reading instruction that reflects the research evidence gathered over the past 20 years. This research indicates that the

In regular classrooms, students read stories or chapters; in remedial classrooms, they do word, sentence, or paragraph tasks.

emphasis for all students should be on actually reading relevant books and materials and understanding them. Instead, most of the instruction involves students in completing skill sheets or drill-and-practice activities, while the specialist teacher simply monitors and corrects performance.

In addition, the specialist teachers we interviewed also seemed unaware that few of their students ever return to the regular classroom with their reading problems solved. All could point proudly to a few successes but seemingly didn't notice that the majority of their students have not become readers.

- ***False Assumption 2: To succeed, poor readers need a "different" type of instruction from the good or average readers—usually outside their regular classrooms.***

Unfortunately, this assumption flies in the face of two decades of reading research suggesting poor readers need larger amounts of higher quality instruction, not a different type of instruction.

Both of the major supplementary programs still favor the small group, pull-out approach. Five to eight eligible students who need help in reading are pulled out of their regular classrooms to work with a specialist for anywhere from 30 minutes to 15 hours a week. But this so-called supplementary instruction is not supplementary at all. When children leave their regular classrooms, they miss something from the core curriculum—most often reading and language activities, sometimes social studies or science. Two federally funded analyses even suggest that participants in the programs actually *lose* instructional time, an odd outcome for programs designed to increase the amount of help students get.

Our research supports this. We found that most children in a remedial or LD class spent the majority of the scheduled pull-out instructional time engaged in non-academic activities. Counting travel-to-site time, social greeting time, waiting time, and off-task time, there was little time left for instruction. What's worse, less than 2 minutes of every hour of the instruction involved teacher-directed reading of text with an emphasis on comprehension—even though this is one of the few instructional activities known to improve reading achievement.

Just as important, we didn't find that reading instruction in either program seemed particularly supportive of instruction given in the regular classroom. Though most classroom programs required students to comprehend stories or chapters in content area textbooks, remedial instruction presented word, sentence, or paragraph level tasks with no emphasis on comprehension. Nor did the subject matter of much of the remedial materials have anything to do with topics in the regular classroom curriculum. Selections on Bigfoot, the Bermuda Triangle, and killer bees provided remedial learners with topical information they'd probably never use again.

Finally, the structure of many remedial lessons seemed to foster a dependence on the teacher rather than developing independent work habits that would serve the students in the regular classroom setting.

This lack of coordination between the

ONE TEACHER'S STORY

BY CAROL MULLER

For 3 years, I did my level best as a Chapter 1 teacher, but I finally had to resign—out of sheer frustration. Here's why it didn't work for me or my students....

- The program was completely separate from the rest of the curriculum, and there were no set guidelines on what to teach. While I was in the program, I felt the administration cared very little about how I managed it or whether it was doing what it was designed to do. Most classroom teachers weren't much help either. I tried getting them to send me a weekly information sheet so I'd know what to plan for each student. But I had the sense that I was being too demanding. So I just guessed about what they might need.
- Within the loosely defined content of the program, the emphasis was on separate reading skills. So I taught primarily skills—to 25 to 30 students a day, on six different levels, without any set curriculum

specialist classroom and the regular classroom was underscored when we interviewed both groups of teachers. Few classroom or specialist teachers associated the special instruction with improved classroom performance. Instead, both assumed that these learners were "different," thus they required a "different" type of instruction. Fewer than 1 in 10 classroom teachers could tell us anything about the instruction their students got from the specialist teachers. Fewer than half the specialist teachers knew anything about the reading programs in their students' regular classrooms. A substantial number of classroom teachers had never seen the Individualized Education Plan (IEP) that's required for all learning disabled students—even though these teachers are supposed to help implement that plan.

- *False Assumption 3: Reading failure is never the fault of the school's reading program.*

This "blame-the-victim" stance is evident in the textbooks used for methods courses in reading disability or learning disability. They suggest that reading failure is caused by such student characteristics as hyperactivity, distractibility, economic disadvantage, neurologic impairment, left-handedness, and so on. Rarely is the classroom instruction questioned—or improved to avoid problems in the first place.

The instructional program is presumed to be adequate, appropriate, and timely. If the child has failed to learn to read, something must be wrong with *him*. Even the Office of Education admitted, in a recent report to Congress, that local evaluations of the instructional program that produced the reading failure are the weakest links in diagnosis.

Report card on the supplemental programs

Evaluation of the effects of Chapter 1 and Public Law 94-142 are woefully inadequate. Yes, the funds are being appropriately distributed to the children who need help. But there's little proof at the local or national level that the programs alleviate reading failure.

- *At the local level.* Though most classroom teachers we interviewed believe the programs haven't helped much, the effects of these programs have never been systematically or scientifically studied at the district or building level. Too few local educators seem to notice that the same children populate the supplementary programs year after year. When this is mentioned, the "blame-the-victim" argument surfaces.

What about gains the children *did* make? Local teachers and administrators almost always attribute these to the supplementary reading programs. Yet they can provide no good evidence of program effectiveness or ineffectiveness. They rarely consider that children might have learned something from regular classroom instruction or have improved through normal maturation.

- *At the national level.* Most large-scale evaluations have focused on compliance with regulations, not program effectiveness. This orientation obscures the effects of the better approaches because it lumps together the good, the bad, and the mediocre programs. Even so, na-

Fewer than 1 in 10 classroom teachers could tell us anything about the instruction their students got from the specialist teachers.

[illegible]

or goals. The boredom of teaching these skills day after day was overwhelming for me and my students.

- An unhealthy stigma affected the students, their parents, and me. Some students who badly needed help didn't get it because their parents refused to have them associated with the remediation label. Some parents whisked their children out at the slightest whim, making any semblance of stability or continuity impossible.
- There was little time for actual instruction. The students were allotted 25 to 30 minutes a day. Travel between their classrooms and the Chapter 1 room (which was located out of the school building) left about 15 minutes of instructional time. I spent most of my time testing students for qualification, planning lessons, grading papers, making progress reports, and keeping up compliance forms for Chapter 1—all wasted efforts in my opinion.

By the time I resigned my Chapter 1 job, I was convinced that classroom teachers should handle remedial students in the regular classroom, with tutors coming in to give extra help. This would solve the problems of isolation and stigma, lack of time, deciding what to teach, and coordinating it all. I presented my suggestions to our board of education in a written report but didn't get the courtesy of a reply.

I'm convinced that as long as federal funding is available, it doesn't really matter if the program benefits remedial students. Getting the money seems to be what's important.

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tional evaluations seem to suggest that children in both programs do benefit from participation but that the benefits are far less than had originally been hoped for. And of course, no one knows what would have happened if neither program had been available.

Educational tradition, stagnation, and red tape keep supplementary programs from incorporating proven instructional techniques.

Living with the difficulties

Our research clearly shows that current programs rarely help children overcome reading failure. That's bad enough. The shame is that educational tradition, stagnation, and bureaucratic red tape inhibit the development and implementation of programs incorporating *proven* instructional techniques.

Until the regulations are less regulatory, teachers and schools must take a hard look at their own programs. And if problems exist, they must take steps to make federal funding, local funding, and individual efforts match the real needs of their students.

What can you as a teacher do to improve the situation? Begin by asking yourself this question: Do I have evidence that this student is getting the amount and quality of instruction he needs to turn reading failure into reading success? If the answer is no, you might try the following:

1. *Assess your school's and your own commitment to children who experience reading failure*. Do the district's efforts extend beyond the legal mandates and spending the funds provided? If, for example, Chapter I funds are not adequate, does your district use local funds to provide supplementary services for all students who need it?

2. *Review the level of coordination that exists between regular classroom and specialist instruction*. Find out what the specialist is doing, compare notes, and work together to offer instruction that builds, extends, and supports mastery of the core curriculum. The least able learners need the most coherent instruction. Placing such students in programs that fragment instruction can further inhibit reading development.

3. *Record the amount of reading instruction that poor readers are getting*. Does their supplementary instructional program give them more instruction? If not, suggest adjustments (perhaps fewer, more concentrated sessions to eliminate wasted time spent coming and going, getting settled, and so on.)

4. *Evaluate what kinds of reading tasks poor readers are getting*. In other words, how much real reading are they doing. Do they read stories? Books? Chapters? Does their instruction prepare them to deal with the real reading demands of school and society? Try to shift things in that direction.

5. *Examine the focus of the reading instruction* you're *providing*. Is comprehension the primary goal? Poor readers tend to need more precise instruction to learn reading/thinking skills such as summarizing. You may have to present a model summary and walk students through the development process. We saw one remedial student chastised for his lack of attentiveness when he couldn't read a paragraph and find the main idea. After the directions were repeated, he dutifully began to work and then, seemingly at random, selected a sentence to be the topic sentence. When he was questioned, it became apparent that his problem wasn't lack of attentiveness. He said, "Well, I just don't know how to tell which one is the main one." What the student needed was a strategy for identifying a main idea. Just attempting more work sheets was unlikely to provide this.

6. *Collect information on readers' success*. To change the pattern of failure, students need to experience huge amounts of success. If your students aren't, adjust both the work you assign and the instruction you provide. Poor readers need a great deal of easy reading, and they need it on a daily basis.

I am one of a number of educators who believe we should face the fact that most of the time supplementary programs don't work very well. They don't work because they're built on false assumptions. Though we know what kind of instruction is most likely to solve reading failure, current compensatory and special education programs rarely offer the needed larger amounts of higher quality instruction that support mastery of the core curriculum. Current programs for poor readers are too often poorly conceived. The time has come to dismantle them and start over.

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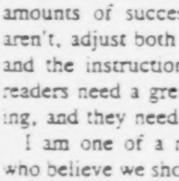

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Teacher Beliefs toward Academically at Risk Students in Inner Urban Schools

Linda F. Winfield

Research has consistently documented that teacher expectations influence student outcomes. These expectations are communicated via specific classroom behaviors and practices that differ substantially for high- vs. low-expectation students. Expectations, to a large extent, are a part of a personal belief system influenced by prior experience with diverse students, teachers' role definition, knowledge of appropriate strategies and techniques, and support services available. In urban schools where there are large proportions of academically at risk students, these factors interact to determine whether or not students receive instruction necessary to improve their low achievement levels.

Teachers' beliefs and expectations of student performance may influence student achievement (Crano and Mellon, 1978; Cooper, 1979; Smith, 1980; Good, 1981). This research has identified different ways in which teachers interact with high-and low-expectation students. Low-expectation students are seated farther from the teacher or in a group (Good, 1981; Rist, 1970). These students are criticized more often for failure and praised less frequently for success (Brophy and Good, 1970; Good, 1982). Low-expectation students are provided with briefer, less accurate feedback (Cooper, 1979; Good, 1981, 1982) and are called on less often to respond to questions (Brophy and Good, 1974; Good, 1981, 1982; Kerman, 1979). Teachers generally pay less attention to these students, interact with them less frequently, and demand less work and effort (Good, 1982, 1981; Gouldner, 1978; Rist, 1970). These behavioral differences indicate the existence of sustaining expectation effects that would make learning by low-expectation students relatively more difficult (Cooper, 1985).

The nature and degree of teacher expectation effects in a particular classroom are likely to vary as a function of beliefs about teaching and learning and specific teacher and student characteristics. Brophy (1985) suggests that (1) teachers' role definition, i.e., the degree to which the teacher is willing to assume the personal responsibility for student learning, (2) the rigidity or flexibility of the expectation, and (3) the saliency and considera-

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tion of expectations in planning and delivering instruction are teacher characteristics that influence expectations formed.

Other research indicates that teacher expectations of students' performance may vary as a function of students' race or social class. Teachers look for and reinforce achievement-oriented behaviors in white students more often than in black students. Teachers also attribute the achievement-oriented behaviors of white students to such internal factors as effort or motivation, while they attribute the achievement-oriented behaviors of black students to factors that students cannot control such as parental encouragement and heredity (Wiley and Eskilson, 1978).

In general, teacher expectancy effects are higher for white students than for black students, and higher for middle-class students than for lower-class students (Baron et al., 1985). Results of experimental studies that tried to determine whether race and social class interact in determining teacher expectations were inconclusive (Baron et al., 1985). The majority of these studies, however, used either a verbal or perceptual manipulation of the race or social class variable to obtain expectancy effects. In a naturalistic study of black elementary school students in classrooms, teachers had higher expectations for students who exhibited middle-class-like behaviors, e.g., verbal proficiency, and classroom social skills, regardless of the teachers' perception of student social-class background (Gouldner, 1978). The discrepancy in findings regarding social class may be due to the differing methods used in studying expectation effects and suggests the importance of ecological validity in conducting research on teacher expectations. The research on the determinants of teacher expectations and behaviors indicates the complexity of this phenomenon and the differential impact on the learning experiences of low socioeconomic status (SES) and black youngsters. (See Scott-Jones and Clark, 1986, for a review of research on the schooling experience of minority students.)

There are few in-depth studies of teacher expectations and beliefs toward the students identified as "academically at risk" students in inner urban schools. Although the definition of "at-risk" may vary across district, schools, or classrooms, these students are generally those who, by some criteria, have failed to acquire basic reading skills and are reading one or more grade levels below their appropriate grade.

In inner-urban schools, there are often large proportions of low SES and minority youngsters who fail to acquire basic skills in reading and mathematics. In general, schools have never been successful with students from low-income populations (Barton and Wilder, 1964). Children from middle-class homes or from the majority culture are imparted a set of experiences, competencies, attitudes, and rules of behavior for achievement that are, for the most part, congruent with those of the schools (Silverstein and Krate, 1975). Lower-class and minority children, on the other hand, do not have these attributes or acquire a different set of behaviors largely incongruent with those of the schools (Ogbu, 1978). The net result is that schools and teachers must work harder in order to achieve some success with low-income and minority populations (Venezky and Winfield, 1979).

Two consistent findings from research on unusually effective schools for low-income and minority students suggest that academic climate and teacher expectations for student progress are among several of the factors that influence schoolwide achievement (Purkey and Smith, 1983, Mackenzie, 1982). Although these are school-level variables, the actual processes of teaching and learning are at the classroom level. It is at this level that teacher beliefs, expectations, and practices have the potential to influence learning outcomes of low achieving students. This paper provides a descriptive analysis of teacher beliefs concerning academically at-risk students in a sample of inner-urbal schools.

SAMPLE

Five inner-urban schools in a major metropolitan district were included in the sample. All schools served predominantly minority and low-income students from their respective surrounding neighborhoods. The racial composition of students and the percentage of low-income and "at-risk" students in each school are shown in Table I.

Forty elementary school teachers (eight within each school) were inter-

TABLE I. School Characteristics

			Student Racial Percentage			Percentage of Low income	Percentage of "at Risk"
School	Enrollment	Grades	Black	White	Other	Students[a]	Students[b]
Hamm	1,064	K-8[c]	98	2		48	60
Scott	863	K-6	100			58	79
Woll	495	K-6	97		3	67	92
Penny	436	K-5	61	37	2	39	71
Pott	281	K-6	80	18	2	45	80
District	17,859	K-12	88	11	1	59	
System	254,000	K-12	62	32	2		

[a] Percentage of students in the school receiving Aid for Dependent Children

[b] Average index calculated over a 3 year period of percentage of students in school placed in a basal reading series one or more years below their appropriate grade. Placement was determined locally, typically by a reading specialist who administered an informal reading inventory.

[c] Enrollment of K-6 students was approximately 850. This particular school housed a 7th and 8th grade districtwide magnet for academically talented students. These students were not included in the study.

viewed using a semistructured interview guide. Teachers were initially selected to represent potentially differing perspectives within the school organization, i.e., "effective and noneffective" teachers as recommended by the principal or reading specialist, the union representative, teachers new to the school, and teachers who had been in the school setting for a number of years. All of the teachers interviewed taught in classrooms where a majority of students were black (ranged from 98% to 100% black).

METHOD AND ANALYSES

Case study methodology was used to examine the five schools over a one-year period. This method allowed for the study of social processes and complex interdependencies within the school. A focused approach to qualitative data collection (Erickson, 1977) was used. Previous work examining schools serving low-SES and minority students (Venezky and Winfield, 1979) provided substantive guidance concerning potentially useful areas for investigating school- and classroom-level reading instructional practices and achievement. Approximately 400 person hours were spent in data collection. On the average, the author was on-site in each school a minimum of one full day a week throughout the school year.

From data collected, a case study narrative was constructed for each school in the sample.[1] Nested within the school narrative were case studies of the school's historical and community context, the orientation of the principal, reading teachers, and teachers, respectively, and a study of schoolwide instructional organization for reading.

Data reported in this article concerning teacher beliefs were taken from case study narratives of teachers in all school sites. A cross-classification analysis (Patton, 1980) was applied to the content of teachers' verbal responses obtained in interviews conducted in all schools.[2] Teachers interviewed varied in the average length of service, race, and grade level taught; however, these variables did not appear to be salient in the analysis. This may have been due to the relatively small number of teachers within each of these various categories.

The interview protocol was used as a guide to probe for teachers' perceptions regarding the "goals of instruction," "roles of the principal, reading teacher and other personnel in the school reading program," "coordination of instruction," "attitudes toward student learning" and "effort expended in classroom instruction." The description of teacher beliefs is based on teachers' self-reports and on observational field notes; however, they were not validated against actual classroom practices.[3] The protocol used as an interview guide is shown in the Appendix.

RESULTS

[redacted] Re[redacted]s of [redacted] conten[redacted]alysi[redacted]cate[redacted] te[redacted] beli[redacted]ward[redacted] [redacted]

demically at-risk students could be categorized on two dimensions. One dimension, labeled "improvement-maintenance," indicated whether teachers believed some type of instructional assistance was needed to improve the achievement of academically at risk students or whether they ignored the students' low levels of performance. A second dimension of teacher beliefs reflected specific behaviors and practices in dealing with academically at-risk students. These behaviors were categorized by whether teachers assumed the responsibility for improving instruction or shifted the responsibility to others. A cross-classification analysis revealed four possible, different types of belief/behavior patterns within this framework. These patterns are depicted in Figure 1.

BEHAVIORS TOWARD ACADEMICALLY AT-RISK STUDENTS

	Assume Responsibility	*Shift Responsibility*
Improvement BELIEFS ABOUT ACADEMICALLY AT-RISK STUDENTS	1 TUTORS	2 GENERAL CONTRACTORS
Maintenance	3 CUSTODIANS	4 REFERRAL AGENTS

FIG. 1. Cross-classification matrix of teachers' beliefs.

An example of teachers' responses identified in the first cell was, "I work with the low group about 20 minutes a day to reinforce skills." Teachers in this cell were labeled "tutors," since they indicated it was their responsibility to provide instruction necessary to improve the reading achievement of the bottom reading group. Teachers' responses in the second cell indicated that remedial instruction was needed, but it wasn't necessarily his or her responsibility. A frequent response from teachers listed in this category was, "I send my bottom group to the Title (now Chapter I) aide." Another response was, "We have a district-funded supplementary remedial program for the low achievers." These teachers were called "general contractors," since students were distributed to other individuals who were responsible for improving achievement.

Teachers' responses identified in cell 3 reflected the belief that there was little or nothing that could be done to improve the performance of [redacted]den[redacted]y at [redacted]tud[redacted] An [redacted]ple [redacted]esp[redacted]n th[redacted]ego[redacted] was, "A few will be on grade level, the other students will just get passed on." Another frequent response was, "These kids need some high-interest/low-level reading materials." Teachers in this cell were labeled "custodians," as their primary concern was maintenance of low levels of achievement. Teachers in the fourth cell, "referral agents," reflected a similar attitude to "custodians," however, the responsibility for maintenance was shifted to others. Unlike "general contractors," however, teachers in this fourth cell felt that at-risk students were generally incapable of learning in a classroom situation or in supplementary programs and commonly referred students for psychological testing or special education. The remainder of the article will provide an in-depth look at specific cases within each of these categories.

Tutors

Mr. Hope

Mr. Hope, a 6th-grade teacher, has taught in Woll School for the past ten years. He insists on "firm discipline" and strict adherence to classroom rules and regulations. He also insists on meeting with each parent at the beginning of the school year and, if necessary, makes home visits. Because of his attitude and reputation, Mr. Hope receives a number of students "by parent requests"; he also receives discipline problems from other teachers. In the interview he stated:

> I have taught a good number of these students' older brothers and sisters. The parents will make a request to the principal to see that their child gets in my room. . . . I also have some unruly kids that other teachers can't handle. You know, the problem is that no one takes time to talk to these kids and find out what is causing them to misbehave. And there has got to be a cause.

The range of reading levels in Mr. Hope's class varied from low (3rd grade) to high (6th grade). To handle this diversity, Mr. Hope used what he called a "skill-oriented" approach. Over the years, he collected a variety of lesson plans, activities, and worksheets for various skills; e.g., comprehension, literal, vocabulary. This information is organized in 3-ringed notebooks by reading level. He indicated that after he completed his own informal assessment, he could easily locate material on a specific skill at the appropriate reading level and provide the necessary instruction. (Mr. Hope had a collection of six different notebooks—2nd- to 7th-grade level.) He claimed that "this saves me time in preparation of materials which I can spend instructing the students." When the Chapter I aide comes in three times a week to instruct Chapter I students, Mr. Hope provides the additional skill-related work from the notebook for the appropriate level and gives it to the aide to use. Mr. Hope commented:

> I believe that the teacher is an important factor in student achievement. Most of my students are from lower-income families, foster families, and one-parent families, but it is my responsibility to make sure they learn something while they're in my classroom. . . . I have no control over what they learn before they get to me or after they leave . . . but I *do* [emphatic] have control when they're here.

Mrs. Pride

Mrs. Pride taught a combined class of 3rd- and 4th-graders in an open classroom in Pott School. She used a different approach from Mr. Hope's, yet she too assumed the responsibility for improving the reading skills of low-performing youngsters. Mrs. Pride did not like Chapter I regulations, which forced her to make discriminations between Chapter I and non-Chapter I students, so for the most part, she ignored those regulations. Although she indicated that her primary goal was to "make students feel good about themselves and school," she also focused on specific needs of various groups of students. Reading levels in her classroom ranged from low (1st grade) to high (7th grade), and students were divided into three reading groups. However, she indicated that the whole class received the same instruction in reading, but that each student was allowed to work at his or her own pace. Once instruction was given on a specific unit, every student in the class received a written contract (mimeographed booklets) for a week's amount of work in reading. The contract included independent seat work activities and homework, as well as specific sections involving teacher interaction and checks on progress. For example, one part of the contract read:

> OW works! Read them to a teacher. Then write your own meaning for each on the back of this page. mouth, ground, cloud, sour, south, pound, account, spout.

Mrs. Pride indicated that the contract always included more activities than could be completed in a week's time. However, the brighter students, who worked at a faster pace, occasionally finished all of the material. The majority of the class generally covered three-fourths of the material. Mrs. Pride said:

> I purposely include more than could be covered, however, the work is sequenced so that the most important activities are done first. One day a week, when the brighter students attend the gifted program, this gives me a chance to work exclusively with the bottom group and do review and reinforcement activities.

Although the two teachers described differed in style and instructional strategies used, the intent and willingness to assume the responsibility for improving instruction were evident. Special programs and aides were employed in their efforts at improvement; however, teachers did not shift the responsibility for instructing academically at-risk students to these groups.

General Contractors

Teachers in this category were similar to "tutors" in that they also believed that low achievers might improve from additional instruction. However, unlike "tutors," "general contractors" relied on other persons or programs to improve the performance of at-risk students.

Mrs. Mapp

Mrs. Mapp teaches 3rd grade and is new to Scott School; however, she taught for 22 years in a parochial school. She claimed that she enjoyed being in the school and enjoyed the students. When asked about the reading program in her classroom, she claimed that the full-time aide in the room never provided the initial reading instruction and only reinforced skill with small groups of students in Chapter I programs. However, observations and interviews with the aide revealed that with this particular group of students the aide provided all of the instruction; e.g., creative writing, reading, math. The aide, a certified teacher, indicated:

> I do everything from teaching reading groups to math. I work with the kids who need help – but then – they all do in this class. I have a list of Title I kids and if the Title I people come around, I tell them that's whom I working with.

Similarly the aide indicated that the teacher generally gave her all the problem kids to work with. She said:

> See, she sends all of her problems back here to me. She can't handle them. This teacher gives the appearance of doing a lot, but she's doing nothing. There's no set routine or schedule. . . .

Mrs. Mapp, the teacher shifted much of the responsibility for improving instruction to the full-time aide in the classroom.

Mr. Dud

Mr. Dud teaches 5th- and 6th-grade students in Woll School and expressed rage, anger, and frustration at the "evils" of the system. He commented:

> They [the system] don't care about these kids. Other schools in other districts receive more . . . nobody gives a damn [sic]. I try, but it's a hard job. What can I do?

Mr. Dud felt that his bottom reading group might improve one level but still wouldn't be up to grade level by the end of the year. He has five reading groups, which include students reading from low (3rd) to high (6th grade) levels. Group F (the bottom group) leaves the room twice a week to receive instruction from the Chapter I aide. Groups G and I receive reading instruction in class. Groups H and K (the top group) receive reading instruction in another classroom, an informal arrangement Mr. Dud had made with another teacher. Mr. Dud had no idea what type of instruction the bottom group was receiving and said:

> Other than the Chapter I reading aide who works with them twice a week, sometimes the language skills teacher works with them. . . . They have their own materials and everything because of federal regulations.

Mr. Dud rationalized that because of the wide diversity in his class, he was forced to make the various arrangements for reading groups. He said:

> The range in my classroom is ridiculous. I have 5th graders who score at the 98th percentile in reading and 6th graders who score at the 6th percentile. What else could I do?

He also indicated that he worked with the two reading groups in his classroom an hour each morning, but that there was little he could do with the lower of the two groups because the "X" reading series was useful only for students who were reading on grade level or one grade level below.

The two cases presented here reflect the type of responses of teachers categorized as "general contractors." Unlike "tutors," general contractors tended to shift the responsibility for improvement to others. This shift, can occur, as was seen in the first example, even when the aide is physically located within the classroom. Teachers' responses in this category suggest that there are ample opportunities to shift the responsibility for improvement of academically at-risk students onto various specialists and programs. Additional evidence for this statement was obtained from questionnaire responses. When asked what they would do if they had a full time aide, the majority of teachers in each school responded, "Let the aide work exclusively with the bottom group."

Custodians

It may be the case that lack of resources, e.g., special programs or aides, may provide a convenient excuse for some teachers to maintain the low levels of achievement of academically at-risk students. Responses in this category would be typical of custodians.

Mrs. Air

Mrs. Air, a 6th-grade teacher in Hamm School had a majority of students in her class who read in preprimers and 2nd-grade basals. She indicated that she had three reading groups in her classrooms and spent approximately 20 minutes with each. Mrs. Air said: "I feel I can have a very positive influence on student learning." However, when later asked to project how far her bottom reading group would progress by the end of the year, she said: "They'll be on the same level . . . won't progress beyond preprimer." Mrs. Air felt progress could not be made because the school did not have a reading skills center or remedial reading teaching where "slow" students could receive help. She also indicated that the aides did not spent enough time with each class to really help improve the situation. Mrs. Air said:

> Many of my students need survival skills in reading . . . most would be considered functionally illiterate. . . . I don't know what will happen to them next year in junior high school. My top group is reading on a second-grade level and can get through some *Weekly Readers* and other material like that. The others can't even do that. There's little I can do without some help.

Mrs. Sadie

Mrs. Sadie, a 3rd-grade teacher in Scott School complained constantly about the "slow" students in her classroom. One day in the lunchroom, she commented to me:

> Half of my class should be in learning disabled classes or something because they can't remember anything. This reading series is phonetic and these children can't discriminate sounds.

On another occasion, she said:

> None of my children can *read* [emphatic]! I showed them four ways to pronounce the ending "ed" and when it appears, what do they do? Try all four.[3]

Mrs. Sadie felt the reading series was inappropriate for inner-urban students and commented:

> The children can't relate to anything in them. X reading series has words like gnaw, gnarled, gulp—who uses these words anymore? Children can't develop fluency because these stupid words act as road blocks. . . . I would eliminate X series and buy some high-interest/low-level readers.

Mrs. Sadie also indicated that in order to improve achievement, the school district should make sure that teacher preparation time started after second period and make it mandatory that every class had reading an hour and a half in the morning at the same time. She added: "That way, I could send my slow group to Mrs. Smith and I'd take one of her groups. . . ."

Mrs. Sadie's ideas for improving the situation were primarily to maintain the current low level of achievement by using high-interest, low-level reading materials. This goal was not to bring students up to grade level, but to bring the materials down to students' current levels. Her second idea for improving the situation is similar to solutions identified by "general contractors" and consisted of shifting the responsibility for improvement of academically at-risk students to others.

Referral Agents

Similar to "custodians," teachers categorized as "referral agents" also assumed the situation for many at-risk students was hopeless. However, unlike "custodians," these teachers frequently shifted the responsibility to special education programs or blamed parents and home background for student failure.

Mr. Brad

According to teachers interviewed in Penny School, Mr. Brad a 5th-grade teacher was effective with the more able students. (Mr. Brad refused to be interviewed and would not complete a questionnaire, thus information was obtained from other teachers in the school for this particular case.) The language skills teacher instructed his bottom group in reading every morning. However, every afternoon, one or two of Mr. Brad's students was observed helping the language skills teacher stack books, run errands, and perform other types of noninstructional tasks. It seems that Mr. Brad refused to teach the slower students in the class. One teacher claimed:

> Mr. Brad has been getting away with not teaching students for years. . . . He probably has gotten more students placed in special ed than he's ever taught.

Other teachers' responses identified in this category were similar in the themes expressed. One 2nd grade teacher in Penny School indicated that she had referred one third of her class for special education testing. A teacher in Hamm School felt that home background accounted for 80% of a student's success in school. He said:

> I know 20% doesn't give us much to work with. There's really not too much a teacher can do. I only have them four hours a day . . . they're at home with no father . . . no one working with them.

Similarly, a teacher in Pott School claimed:

> We have seven special ed classrooms now and the resource room is probably filled. . . . I have no idea where they will place these students I am referring . . . but it usually takes two years before students are actually placed.

A teacher of learning disabled students in Woll School commented:

> Ten of my students have normal IQs but most of them are 3 grade levels behind in reading. They end up here because of misbehavior. They're usually diagnosed as either hyperactive or extremely withdrawn and never say anything.

There is no way to tell from the data collected what percentage of students in each school were misplaced in special education classes. However, special education was an option considered and available to teachers who had "at risk" students in their classrooms. These teachers believed that these students could not learn in a regular classroom environment and shifted the responsibility to special programs or blamed parents and home background factors for students' failure.

DISCUSSION

Patterns of teacher beliefs described here provide a framework for understanding various options teachers may have in teaching academically at risk students. These patterns appear to reflect teacher beliefs about improvement or maintenance of instructional levels as well as their willingness to either assume or shift the responsibility for instruction. These beliefs are likely to have consequences for the instruction and subsequent learning outcomes of academically at-risk students who generally require increased opportunities to learn to achieve mastery of reading skills and concepts (Winfield, 1987). These opportunities include instruction that is congruent in approaches and coordinated between the classroom and supplementary instruction (Johnston et al., 1985).

Caution must be exercised, however, in generalizing from the patterns reported here. These conclusions are based on case studies of teachers in five inner-urban schools. In addition, these studies do not provide strict causal tests of hypotheses but are generative in nature. Like most typologies, these descriptions oversimplify the reality of complex social interactions involving teachers and students in classroom situations. The categories provided here may be considered heuristic in attempts to study and document teacher beliefs and practices that ultimately affect student learning in urban settings.

Rather than view the categories as mutually exclusive, they may represent a continuum or stages in teachers' responses to academically at-risk students. We might speculate that "tutors" might reflect the "optimal" level and are characteristic of those teachers we label as "effective teachers." These teachers believe they can provide the necessary instruction, and find the means to do so. In "effective schools," teachers responded to failure as a challenge, requiring students to redo failed work rather than writing the students off or referring them to remedial classes. They responded to failure with appropriate feedback and reinstruction rather than lowering of standards (Brookover et al., 1979). However, other demands on teachers' time, diversity of student needs, lack of adequate knowledge of alternative instructional strategies, and insufficient resources might mitigate against the optimal level. Thus, at a next lower level or stage, teachers might become "general contractors" and decide to go along with a system that allows them to shift the responsibility for instruction to other personnel or programs.

Teach[illegible] labeled as "custodians" and "referral agents" may represent the low[illegible] levels on the continuum. Thus, for example, if supplementary programs or personnel are unavailable or teachers believe such programs will not help the achievement levels of at-risk students, teachers become "custodians" and maintain the current low achievement levels. On the lowest level (and perhaps as a last resort) teachers decide that the student is not "[illegible]able[illegible] a r[illegible] cla[illegible]m a[illegible]ou[illegible] ref[illegible] to [illegible]

Additional data obtained on the school-level instructional program suggest that policies and practices, e.g., number of supplementary programs and coordination, grouping practices, role and activities of the principal and reading specialist, may influence teacher beliefs and practices toward academically at-risk students. We know from previous studies that most special or supplementary reading programs operate under the assumption of a profession oriented delivery of services whereby each program retains its independence, emphasizes its own special instruction and materials, and establishes territorial claims to certain groups of students (Venezky and Winfield, 1979). Without a principal who serves as an instructional leader, i.e., a person actively involved and monitoring the instructional program and coordinating the various special programs with classroom reading instruction, goals and responsibility for improving student instruction become diffused. Teachers in schools characterized by this condition may be more likely to shift responsibility for improving instruction onto special programs or personnel. Other research on teachers' pedagogical judgments also suggests that certain institutional factors, e.g., administrators and policies, may influence teachers' decisions concerning instructional goals (Shavelson and Stern, 1981).

In conclusion, the study provides a descriptive analysis of teacher beliefs and practices and a potential framework for investigating and improving the learning opportunities of academically at-risk students. Determinants of teacher expectations and beliefs, e.g., race and SES, are important to explore. However, it is also critical to investigate and specify the relationship between school-level policies and practices and teacher beliefs. These "alterable" variables are under the control of the school or district and may ultimately lead to improvements in the instructional outcomes of academically at-risk students in inner-urban schools.

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NOTES

1. Data collection activities included multiple, unstructured interviews with principals, reading teachers, and other school personnel within each school, multiple observations of classroom activities, staff meetings, principals' activities, and semistructured interviews with teachers within each school. Additionally, all teachers within the sample schools were administered a 5-page questionnaire designed to collect information on perceptions of the reading program in their school. School documents, principals' memos, and bulletins to staff and parents were also analyzed. Names of schools and teachers used in the artic[illegible] fictiti[illegible] and any reference to actual persons or schools which might exist is purely coincidental.

2. Measures used to validate the findings included (1) consideration of competing explanations for suggested relationships, (2) triangulation of methods, i.e., comparing data collected through observations, interviews, and questionnaires, and (3) triangulation of data sources, i.e., comparing the consistency of information collected from various principals, reading teachers, and teachers over the school year.
3. An inductive method was used to construct categories and search for emergent patterns in field notes and interview data. Cross-classification involves the creation of potential categories by crossing one dimension with another and then working back and forth between the actual data and the logical constructions filling in the resulting matrix. The logical system will create a typology, all parts of which may or may not be actually representated by the data. The analyst moves back and forth between the logical construction and the actual data in the ongoing search for understanding through description (Patton, 1980, p. 314).
4. There are only three ways to pronounce "ed": "d" as in *tried* and *played*, "id" as in *graded* and *drafted*, and "t" as in *jumped*. One might think that if students tried all three endings, this was an indication that they were able to read the word. However, the teacher failed to mention whether students had learned the more important aspect of this ending, i.e., its use as a marker for past tense. The other issue is, why is she teaching what students already do automatically? The ending "ed" should be taught as a "past tense marker."

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APPENDIX A: PROTOCOLS FOR SEMISTRUCTURED INTERVIEWS WITH TEACHERS

General Topics

1 What are the top priorities at ____ school? Where does reading fit in?
2 What are the strengths and weaknesses of the current reading program?

Goals

1 Are there any specific goals for reading this year? What are they?
2 Who decides what goals are going to be accomplished in reading each year?
(Probe) Is reading a district, school or classroom goal?

Roles

1 Who directs and coordinates the reading program?
2 What role does the principal play in the reading program?
  (Probes) Types of things principal does
    How does principal find out what instructional activities occur in the classroom?
    How much time does principal spent assisting teacher on curricular and instructional matters
3 What is the role of the reading specialist in the reading program?
  What specific activities? activities to assist teachers? students?
4 How many other personnel in building assisst in reading? What are their functions?

Coordination

1. How often do you come in contact with the reading specialist? with aides? What is the purpose of the meeting? How useful?
2. What kinds of information do you receive from the reading specialist concerning individual students? from aides?
3. Are students ever taken out of regular reading instruction to attend special programs, e.g., Title I, gifted, etc.

Attitudes

1. What types of home background do the majority of students come from? How important is this for school success?
2. How easy or difficult is it to detrmine how much each child will gain in reading during the school year?
   (Probes) How much teacher can influence learning

Effort

1. How much time is spent in reading instruction each day?
2. How much time is spent with each reading group?
3. Does everyone in your class receive the same homework assignemtn?
   Why, Why not?
4. How are students grouped for reading instruction? What kinds of information do you use in structuring reading groups?
5. How often are students regrouped for reading instruction during a school year?
6. What types of resources are available for students performing 1 year or more below grade level?

Do Chapter I Programs Promote Educational Equity? A Review and Some Comments

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The original intent of the Elementary and Secondary Education Act of 1965 was to promote educational equity for poor and disadvantaged children. This act set a precedent for federal aid to education and was considered an effective way to break the cycle of poverty (McLaughlin, 1975). Since 1965, $38 billion in federal funds has been spent on Title I (currently known as Chapter I), the largest of the compensatory programs (Wahlberg, 1984). One of the major concerns of policymakers has been to determine the effect of Title I programs on the achievement of participants. Have these programs achieved their original goal of promoting equity?

There are many definitions of educational equity. The late Ron Edmonds (1981) defined equity as "the opportunity for all students to advance to the next level of schooling" (p. 2). Edmonds (1981) suggested that educational equity required not that all students engage in advancement to the next level but that all students obtain the necessary prerequisites to be successful at the next level of schooling. This implies achievement equity up to the last level.

Implicit in the Edmonds definition are components elaborated upon by Brookover and Lezotte (1981). They define educational equity in terms of access, participation, and outcomes. First, does everyone have equal access to the same facilities and programs? Second, does everyone participate equally? Third, are educational outcomes equal for all students? Brown (1982) suggests that equity or equality of educational opportunity means that a pupil's family background, religion, race, or sex should be neither an advantage nor a disadvantage in being exposed to high-quality curricula and instruction.

Evaluations of Title I

A considerable amount of literature exists regarding the evaluation of Title I programs. Studies have been conducted in response to legislative requirements to recommend ways of increasing the effectiveness and usefulness of federal education evaluation (Boruch & Cordray, 1980; Raizen & Rossi, 1980). Recently, Congress mandated the National Institute of Education to conduct an in-depth study of Chapter I as part of the 1983 Technical Amendments to the Education Consolidation and Improvement Act. State and local educational agencies are required by federal regulations to conduct evaluations of these programs. Additionally, social scientists have conducted analyses of the effectiveness of Title I (Carter, 1984; Cooley & Leinhardt, 1980) as well as meta-analyses (Glass & Smith, 1977).

According to Kaestle and Smith (1982), two generalizations can be obtained from the collection of studies. First, "policymakers are no longer certain that expensive, large-scale evaluation efforts carried out by prestigious educational researchers can provide useful data on the overall effects of large educational interventions" (p. 397). Second, the positive trend in results from evaluation of Title I are promising at best (Kaestle & Smith, 1982). These authors further indicated that scientists and policymakers are now more appreciative of the value of describing and understanding the implementation of programs rather than the previous focus on hard outcome data for cost-benefit assessment.

Although the federal education laws and regulations were modified numerous times between 1970 and 1980 in attempts to improve the efficiency of delivery of resources, rarely did the rationale for modification have any direct relation to improving the educational outcomes of the program (Kaestle & Smith, 1982). Recently, the focus has shifted from questioning the benefit of compensatory services to the question of how adequately and efficiently these services are being delivered. Both of these questions are important; however, this latter question is a necessary prerequisite for answering any question concerning the benefits.

Brown (1982) suggested that Title I could not be adequately defined as compensatory based on the number of disadvantaged students served, the amount of money spent, the amount of instructional time, or the

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amount of parental involvement. Evidence collected in the Sustaining Effects Study provided similar conclusions. This study addressed the equity issue in terms of the delivery of services and the benefit of Title I. The Sustaining Effects Study was started in 1975 when data were collected on 120,000 students in over 300 elementary schools throughout the country for three successive years (Carter, 1984). Results from this study raise serious questions concerning educational equity in terms of Title I students' access, participation, and outcomes.

Equity of Access

For poor students, access to the additional instruction is severely limited. Among economically poor students, 40% received compensatory education and 60% did not. Poor students were defined by the Orshansky Index, the index used by the federal government to define poverty. Many needy students do not have access merely because of regulations involved. Title I is administered as a poverty-based program at the school level but an educationally based program at the student level (Carter, 1984). Cooley (1981) indicated that there was still considerable confusion surrounding Title I regulations. The general procedure is to allocate funds to states and then to school districts in terms of poverty criteria. Funds are then allocated to schools within a district based on poverty criteria and performance on standardized achievement tests. Within schools eligible for Title I support, students are considered eligible if they score below grade level or are in the lower quartile on standardized achievement tests. Thus, disadvantaged children who attend schools that do not receive Title I funds would not have access. Brown (1982) reached a similar conclusion and indicated that "Title I coverage of children from poor families is not very extensive" (p. 135).

Similarly, Title I students who scored above the achievement cutoff the previous spring would also be ineligible for additional instruction (Cooley, 1981). One study indicated that using a single-year criterion for such students results in many students falling below grade level after a year out of the program (Kean & Scanlon, 1979). These regulations result in inequity in access to the programs.

Equity of Participation

Beyond the fact that some disadvantaged students attend schools not eligible for Title I programs or score above the achievement cutoffs, the level and quality of participation is unequal. There were more nonpoor and noneducationally disadvantaged students receiving Title I services than there were poor and disadvantaged, based on percentages and number of students receiving Title I and other compensatory education services. Carter (1984) indicated that in 1976-1977, 1,230,000 poor students and 1,693,000 nonpoor students received Title I. There were approximately 2,500,000 poor students who did not receive any compensatory education. Among low-achieving students, 46% received compensatory education and 54% did not. Among regular-achieving students, 19% received compensatory education.

The absolute number of low-achieving students receiving compensatory education is smaller than the number of regular-achieving students. There were about 1,200,000 low-achieving students and 1,300,000 regular students receiving Title I. About 2,000,000 low-achieving students did not receive any compensatory education. Among students who were both poor and low achievers, 40% received compensatory education and 60% did not. Other comparisons indicated that there were significant numbers of nonpoor, regular achievers who received compensatory education (Carter, 1984).

These numbers reflected the instability of programs, the lack of continuity of services provided to students, and the achievement-level criteria (Cooley, 1981). Title I regulations permit any eligible school in a given year to be designated as a project school for an additional two years. Students may continue in a Title I program if they were participants in a previous year, but only if they remain educationally deprived. Thus, similar to the situation in determining who has access, students whose achievement scores near the cutoff level may enter and leave the program from one year to the next as the observed achievement moves below or above the cutoff.

Level of Participation

Of those students who participate, what is the level of participation? Federal regulations require that the allocation of resources be restricted to poor or low-scoring students. Title I-supported teachers provide additional instructional services to eligible students and are not permitted to serve students who are ineligible for Title I. Because Title I is a supplemental program, Title I-funded teachers are not supposed to be the only teachers to serve eligible students. The implementation of these regulations results in a profession-oriented delivery of instructional services (Venezky & Winfield, 1979). This type of service delivery occurs when each program retains its own independence, emphasizes its own special instruction and materials, and establishes territorial claims to certain groups of students (Venezky & Winfield, 1979). The typical instructional mode for Title I services continues to be the pullout model in which students are physically removed from their regular classroom to receive their supplemental instruction.

One of the consequences of a profession-oriented delivery mode is that it relieves the regular teaching staff, and often the principal, of the responsibility for ensuring that their lowest scoring students will succeed. There are situations in which, because of scheduling conflicts and other constraints, Title I instruction is the only instruction students receive. In case studies of inner-urban schools where several profession-oriented supplementary programs had been implemented, more than 50% of the teachers in those schools indicated that their lowest-achieving students were sent to a special program for reading instruction (Winfield, 1983).

Another consequence of this mode of service delivery is the fragmentation of the school experience for students enrolled in Title I programs. These students are frequently confronted with differing textbooks, methods, and instructional content in reading and math. For example, one complaint heard frequently from Title I teachers is that students are confronted with inappropriate content in the regular classrooms. A student who might need instruction and reinforcement in addition and subtraction might be working on multiplication and division in the regular classroom because that is what the regular teacher is doing with the rest of the class. Cooley (1981) indicated that there were probably schools in which the pullout practice is effective, but that there were certainly schools where this practice was doing more harm than good. Kaestle and Smith (1982) suggested that a consequence of implementing Title I regulations has been that separate administrative structures were developed in schools and school systems. They indicated that as a result, no pressure was placed on the regular structure to improve and little of lasting importance would remain if federal dollars were withdrawn.

Quality of Participation

Separate administrative structures and profession-oriented services tend to reduce students' opportunity to learn. Opportunity to learn can

be defined as the amount of time available for learning, the amount of on-task behavior, the overlap between curriculum content and test content, and the overlap between the regular program and the Title I program.

Brown (1982) questioned the extent to which Chapter I services are considered compensatory given that, in practice, instructional time per day and per year is a constant for both Title I and non-Title I students. Carter (1984) concluded that Title I students received more hours of instruction in reading and math but that there was no net gain in total instruction. Title I teachers had less teaching experience but more coursework and in-service training in teaching methods than regular teachers. Title I students received less of their instruction in large groups in regular classrooms and more instruction in small group settings from special teachers and aides. The typical compensatory education instructional mode was pullout. Title I teachers use the same methods as regular teachers in the first two grades. However, by sixth grade, methods were found to be totally different (Carter, 1984).

Another variable closely related to opportunity to learn not considered in the Carter (1984) model is the content covered in regular and Title I instruction. This variable is influenced by how closely student progress is monitored, the degree of coordination between regular and Chapter I programs, teachers, attitudes, and the orientation of the school and district toward assuming the responsibility for instructing Title I students (Winfield, 1983).

Winfield (1984) indicated that Chapter I students who had received services for two years between third and fifth grades were initially placed one-half year below grade level. After the two-year period, the majority were placed one-half to two years below grade level. A similar decline in placement levels was also found in mathematics. In the study, multiple regression analysis was used to analyze the relationships among fifth-grade achievement, third-grade achievement, group membership in Title I, instructional levels at third and fifth grade, teacher letter grades, and school attended. Controlling for the prior achievement of Title I students at third grade and other variables, instructional placement at fifth grade was statistically significant and accounted for 2% of the variance in fifth-grade achievement in reading ($F = 8.273$, 1 and 92 d.f., $P < .05$) and 2% in math ($F = 5.345$, 1 and 92 d.f., $p < .05$). The below-grade level instructional placement levels of many Chapter I students may partially explain the negative effect found in some longitudinal studies of Chapter

I program impact (Winfield, 1984). School of attendance was found to have a significant negative effect in reading after controlling for the other variables ($F = 5.836$, 1 and 92 d.f., $p < .05$). The results point out the significance of the relationship of the school program and the content covered with Title I students to the long-term achievement gains.

Barr and Dreeben (1983) indicated that the amount of material covered by the members of instructional groups was primarily a function of group mean aptitude. In addition, group properties and the instructional activities associated with them represent conditions that in turn influence individual learning. Students in Title I programs are by definition grouped as low-achieving students. This labeling process and grouping promotes inequity in the quality of the curricula and instruction received.

Equity of Outcomes

The current evidence concerning the impact of Title I programs on student achievement outcomes is equivocal. A substantial body of data indicates that some Title I programs have short-term slightly positive effects on student achievement (Mayeske, 1976; National Institute of Education, 1977; Rossi, McLaughlin, Campbell, & Everett, 1977; Thomas & Pelavin, 1976). However, the effect is not for all elementary schools, grades, or subject matter. Longitudinal effects found have been small (Stonehill & Anderson, 1982). Carter (1984) indicated that Title I was effective for students who were only moderately disadvantaged but did not improve the relative achievement of the most disadvantaged of the school population. Winfield (1984) found that participation in Title I over a two-year period had a negative effect in reading but a positive effect in math.

By the time students reached junior high school, there was no evidence of sustained or delayed effects of Title I (Carter, 1984). Former Title I students took more remedial courses in junior high school than other students (Carter, 1984).

Carter suggested that, because of the low level of achievement and the high rate of mobility of the recipients (40%), it will take more intensive programs to obtain gains large enough to narrow the achievement gap between Title I and regular students.

After one year's participation in Title I, about 25% of the students were promoted out of Title I to regular class status and were able to maintain their regular status (Carter, 1984). Because Title I is a funding program, the resulting educational program and its actual implementation are quite varied. There is a complex interaction among the curriculum, the characteristics of teachers and administrators, the social and economic characteristics of the school, and the background of the students. Thus, in attempting to improve the performance of disadvantaged students, one must improve a large number of educationally relevant factors (Carter, 1984).

One might agree with Carter's assertion; however, in those schools found to be unusually effective in teaching reading to minority and low-income students, building-level coordination between instructional programs was a critical factor. The coordination of all extra personnel involved with reading instruction is needed to ensure that the regular reading instruction is reinforced. In one effective school, this coordination entailed a change in the management of Title I personnel so that they were made responsible to the building principal. Additionally, Title I teachers were included in all staff meetings and placed in close proximity to the school reading specialist. When test scores of Title I participants were examined, average gain scores as measured by the Gates MacGinities Reading Test were greater than one year per year for each of grades three, four, and five for a three-year period (Venezky & Winfield, 1979). Given the restrictions of federal regulations, the teachers' and principal's attitude reflected a student-centered delivery of instructional services as opposed to a profession-oriented one. Coordination may not be easily attained, but it can be obtained with the appropriate leadership at the school building level.

The failure of Title I is not just in the lack of long-term achievement effects but also the lack of long-term school effects. This may be attributable to the fact that Title I is designed as a supplemental program. The most important criteria for assessing educational equity, however, is equality of curricula and instruction (Brown, 1982). For this reason, it is probably more beneficial to focus on the school as a unit and to upgrade its total effectiveness rather than to focus on particular subpopulations, with the consequent lack of long-term school effects.

Conclusion

At this point, the answer to the original question, "Do Title I programs facilitate equity?" appears to be "no." This situation does not necessarily reflect the potential for influencing educational equity. It is well recognized that schools serving impoverished neighborhoods need more resources to perform the same task than do schools with fewer poor children. However, for the past 15 years, trying to restrict Title I funds to eligible children has not been successful (Cooley, 1981). Most programs operate with the restriction but are not particularly effective.

Several alternatives have been suggested. Cooley (1981) recommended that school districts be allowed to change the manner in which they allocate and use Title I funds. If operated properly, this might eliminate the labeling, expectations, and lack of coordination that typically accompany Title I programs. Similarly, Brown (1982) suggested that the federal government should provide financial incentives for increases in students' mean achievement test scores based upon the average test score in a district for the preceding five-year period. Ginsburg and Turnbull (1981) advocated that a more effective federal role may be attained through that of program coordination with the school building. They indicated that "equity for historically neglected groups, the aim of most federal spending could be better served by making these groups' education an integral part of the whole school's activities" (p. 34). Wahlberg (1984) suggested that to equalize the amount learned by income groups or to reduce the gaps between them, direct financial grants should be made to poor parents to purchase services from public and private schools or individual teachers and tutors.

It is commonly agreed that the original intent of Title I was to promote educational equity. School districts received additional resources as well as regulations to ensure compliance. However, these programs also provided an opportunity for districts to abdicate responsibility for improving the achievement of poor and needy students, and, historically, schools have never been successful with this population of students. Thus, some of the blame for the failure to promote equity may be directed toward Title I and its restrictive and confusing regulations. However, much of the blame must be directed toward schools in general. Educational equity should be a responsibility of schools and districts and not be considered the exclusive goal of a federally funded program.

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SEGMENT 2

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Segment 3

ABILITY GROUPING AND ITS ALTERNATIVES: MUST WE TRACK?

Robert Slavin and Barbara Bennett

Outline
Trajectory Graphic
Readings

95

FOR NOTE
TAKING

SLAVIN/BENNETT OUTLINE
Alternatives to Tracking

Ability Grouping: Many Practices Under One Name

Alternatives to Tracking

(1) *Untracking*

(2) *Re-Grouping for Selected Subjects*

(3) *Joplin Plan*

(4) *Within-Class Ability Grouping*

Alternatives to Ability Grouping/Specific Strategies

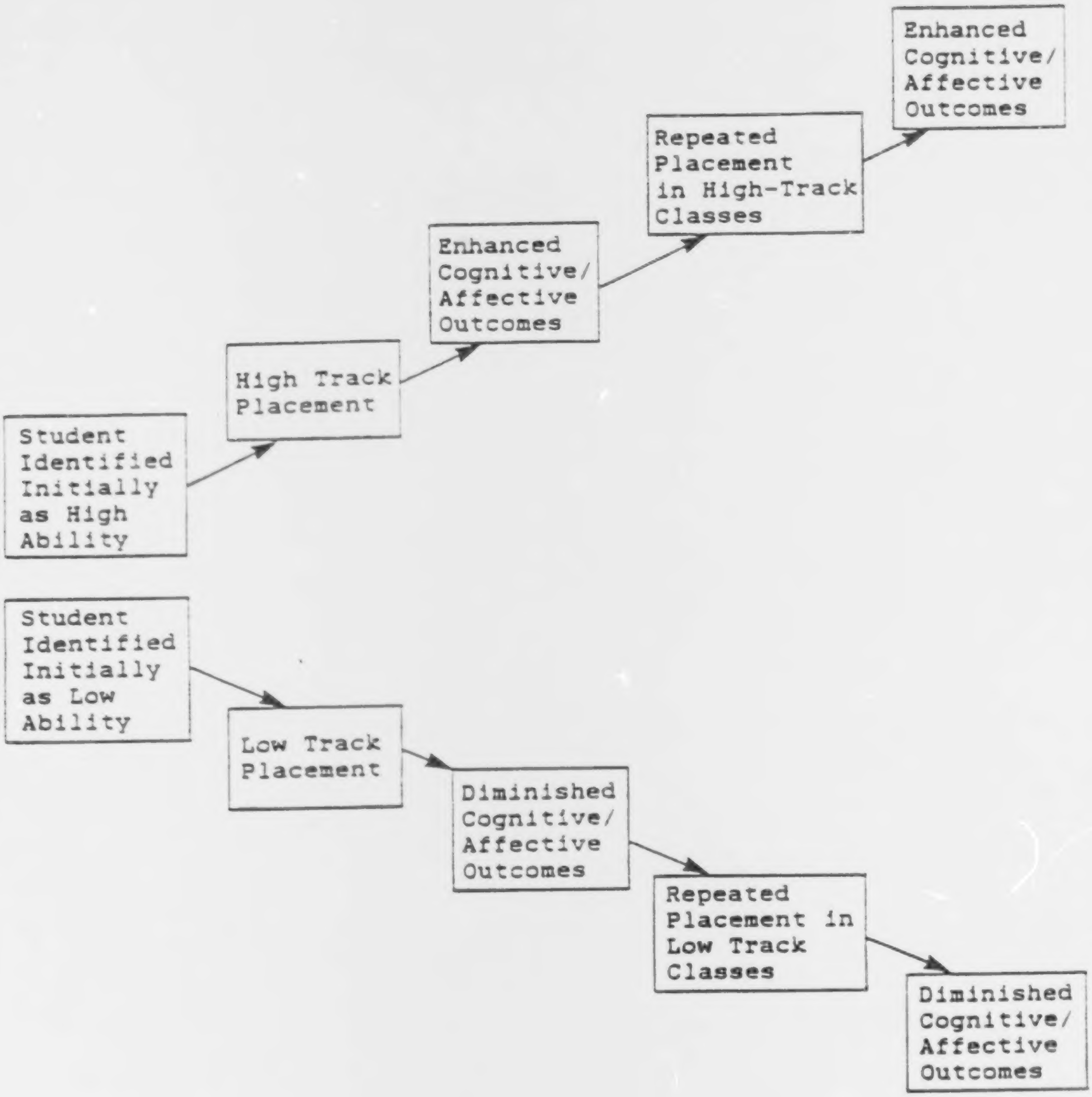
(1) *Cooperative Learning*

(2) *Continuous Progress*

(3) *CIRC and TAI*

(4) *Preventative Tutoring*

(5) *Success for All*


Enhanced Cognitive/ Affective Outcomes
Repeated Placement in High-Track Classes
Enhanced Cognitive/ Affective Outcomes
High Track Placement
Student Identified Initially as High Ability
Student Identified Initially as Low Ability
Low Track Placement
Diminished Cognitive/ Affective Outcomes
Repeated Placement in Low Track Classes
Diminished Cognitive/ Affective Outcomes

Trajectory Graphic

The Consequences of the Tracking Cycle

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ABILITY GROUPING AND ITS ALTERNATIVES: MUST WE TRACK?

BY ROBERT E. SLAVIN

I FELT good when I was with my (elementary) class, but when they went and separated us — that changed us. That changed our thinking, the way we thought about each other and turned us into enemies toward each other — because they said I was dumb and they were smart.

When you first go to junior high school you do feel something inside — it's like an ego. You have been from elementary to junior high, you feel great inside. . . . You get this shirt that says Brown Junior High . . . and you are proud of that shirt. But then you go up there and the teacher says, "Well, so and so, you're in the basic section, you can't go with the other kids." The devil with the whole thing — you lose — something in you — like it goes out of you.[1]

ONE OF the oldest and most emotional issues in education concerns the problems of grouping students for instruction. On one hand, we know that students differ in knowledge, skills, developmental stage, and learning rate. Grouping students by ability seems to be the logical way to deal with these differences so as to provide instruction appropriate to their various levels of readiness. Yet as educators we feel uncomfortable in making grouping decisions about youngsters that could have far-reaching effects on them, and we can empathize with students like the one interviewed above, who was assigned to the basic track when he entered junior high school.

The question of how students should be grouped for instruction has been a point of sharp discussion since the turn of the century. A 1927 dissertation listed 83 "selected references" on the topic. Over this time period, the same essential arguments have been advanced on both sides. Proponents have argued that ability grouping lets high achievers move rapidly and gives low achievers attainable goals and extra help. Opponents have countered that ability grouping is unfair to low achievers, citing problems of poor peer models, low teacher expectations, and slow instructional pace.

Today, ability grouping is still a controversial issue. One reason for a recent resurgence of interest in the issue is a concern about equity in desegregated schools. The most common form of grouping assigns students to ability-homogeneous classes or tracks according to some general measure of ability or achievement. For example, an elementary school might have a high fourth grade, an average fourth grade, and a low fourth grade. A high school might have college preparatory, general, and vocational tracks. This form of ability grouping often creates racially identifiable classes or tracks and has therefore been a major issue in lawsuits in which the plaintiffs argue that tracking is used to resegregate ostensibly desegregated schools. In one recent case in South Carolina, an administrative law judge ruled that since ability-grouped class assignment concentrated black students in low-ability classes and had no educa-

ILLUSTRATED BY SUSAN LEWIS

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tional justification, the district was compelled to abandon the practice or lose its federal funds.

What is the evidence concerning the achievement effects of ability-grouped class assignment, and what alternative means of grouping students for instruction might plausibly be used to accommodate student heterogeneity?

Reviewers of research on these questions have usually concluded that the evidence is hopelessly muddled and inconclusive. However, in an exhaustive review of the best evidence available, I found that if the research results are broken down according to the type of ability grouping used, the conclusions become much clearer.[2] The problem with earlier reviews is that they have often jumbled together ability grouping of classes (i.e., tracking) with ability grouping within classes (reading and math groups), ability grouping for just one or two subjects, and special classes for gifted or learning-disabled students. My review considered each of these categories separately and focused on studies of at least one semester's duration that used standardized tests of reading and/or mathematics. This article briefly reviews the research on various forms of ability grouping and alternatives to ability grouping from the standpoint of both instructional effectiveness and potential segregative impact.

THE PRINCIPAL types of grouping arrangements fall into two major categories: between-class and within-class. Between-class plans are school-level arrangements by which students are assigned to classes according to some measure of ability or performance. Within-class grouping arrangements may attempt to reduce the heterogeneity of the larger class, as in the use of within-class ability grouping or mastery learning. Or — as in the case of cooperative learning models — they may try to put the natural heterogeneity of students to good use. The following discussion defines the various grouping plans and briefly presents the research that has been done on each.

In my review of the research on ability grouping in elementary schools, I found that between-class grouping is not a single practice.[3] Rather, it takes many fundamentally different forms with different educational as well as psychological effects. The most important types of between-class ability grouping are discussed in the following sections.

Ability-Grouped Class Assignment. In many elementary schools, students are assigned to self-contained classes on the basis of a general achievement or ability measure. At each grade level this might produce a high-achieving class, an average-achieving class, and a low-achieving class, with students assigned to classes according to some combination of a composite achievement measure, IQ scores, and/or teacher judgment. Students remain with the same ability-grouped classes for all academic subjects. In junior high and middle schools, ability-grouped class assignment may take the form of block scheduling, where students are assigned to one class by ability and travel together from subject to subject, or students may be assigned by ability to each subject separately. High school students are usually assigned to tracks, such as college preparatory, general, and vocational.

The achievement effects of ability-grouped class assignment are essentially zero at the elementary level and are very slight at the secondary level.

The achievement effects of ability-grouped class assignment (in comparison to heterogeneous grouping) are essentially zero at the elementary level[4] and are very slight at the secondary level.[5] There is some evidence that high achievers may gain from ability grouping at the expense of low achievers, but most studies find no such trend. Overall, the effects of ability grouping cluster closely around zero for students of all achievement levels.

One probable reason that ability-grouped class assignment has little effect on student achievement is that this plan typically has only a limited impact on the heterogeneity of the class. That is, it doesn't result in very pure ability grouping. For example, Goodlad and Anderson estimated that dividing a group of elementary students into two groups on the basis of IQ reduced total variability in each class by only seven percent. With three groups — and elementary schools typically have no more than three classes per grade — heterogeneity was reduced by 17 percent, still not likely to be enough to have a measurable impact.[6] Even though a student's performance in any one subject is correlated with performance in other subjects, this correlation is far from perfect. This means that grouping students on any one criterion is sure to leave substantial heterogeneity in other skill domains.

While assigning students to "high" and "low" ability classes typically has a minimal impact on class heterogeneity, it may have a stigmatizing effect on low achievers, may evoke low expectations for student achievement and behavior, and may reduce student self-esteem. Thus, this approach to grouping students may be enough to produce psychological drawbacks but does not do enough to reap the potential educational benefits of reducing student heterogeneity.

If ability-grouped class assignment produces few if any learning benefits, is detrimental to self-esteem, and has a segregative impact in desegregated schools, its continued use can hardly be recommended. Yet the problem of student heterogeneity must be addressed in some way. The following sections discuss alternative between- and within-class grouping plans that may be able to adapt instruction to students' needs more effectively and equitably than ability-grouped class assignment.

Regrouping for Reading and/or Mathematics. One commonly used ability grouping arrangement in elementary schools keeps students in heterogeneous classes most of the day but regroups them for selected subjects. For example, three fourth-grade classes in a school might have reading scheduled at the same time. At reading time, students might leave their heterogeneous homerooms and go to classes organized according to reading levels. Similarly, junior or senior high school students may be ability grouped for some subjects, such as math or reading, but not for others.

Regrouping for selected subjects has three important advantages over ability-grouped class assignment. First, students remain in a heterogeneous setting most of the day, so they are likely to identify with that group, reducing the labeling effects and racial identifiability of all-day grouping. Second, students are grouped solely on the basis of their achievement in reading or mathematics, not general achievement or ability level, so a meaningful reduction in heterogeneity in the skill being taught is possible. Third, regrouping plans tend to be more flexible than ability-grouped class assignment, because changing students between reading or mathematics classes is less disruptive than changing basic class assignments. For this reason, any errors in assignment can be easily remedied, and any changes in student performance level can be accommodated with a change in grouping.

Research on regrouping plans indicates that they can be instructionally effective if two conditions are fulfilled: Instructional level and pace must be completely adapted to student performance level, and students must be regrouped for only one or two subjects (reading and/or mathematics only) so that they stay in heterogeneous placements most of the day. On the other hand, when students are regrouped without adapting the pace or level of instruction or in more than two subjects, no benefits have been found.

Joplin Plan. One interesting form of regrouping once common in elementary schools is the Joplin Plan, in which students are regrouped for reading without regard for grade levels.[7] That is, a reading class at the fourth-grade, first-semester level might contain some third, some fourth, and some fifth graders. One important consequence of this plan is that it allows for the reduction or elimination of within-class grouping for reading, as students in each reading class may all be at the same reading level. This allows teachers to spend more time on direct instruction, thus reducing the time during which students must do unsupervised follow-up seatwork.

Achievement effects of the Joplin Plan and closely related forms of nongraded plans have been quite positive overall. For example, Rothrock compared fourth and fifth graders in reading classes organized according to the Joplin Plan to students in regular reading classes that used within-class reading groups. The Joplin classes gained an average of 31% of a grade equivalent more than the traditionally taught classes on a standardized test of reading comprehension and 57% of a grade equivalent more in work-study skills.[8]

The Joplin Plan has two particular advantages with respect to equity issues. One is that by grouping across grade lines, each regrouped reading class is likely to be about as racially integrated as the total school. Second, by reducing or eliminating the use of reading groups within the class, total time for direct instruction is increased and equalized for all students.

> ***The Joplin classes gained an average of 31% of a grade equivalent more than the traditionally taught classes on a standardized test of reading comprehension.***

To summarize: Between-class ability grouping plans are beneficial for student achievement when they incorporate the following features:

- Students remain in heterogeneous classes most of the day and are regrouped by performance level only in such subjects as reading and mathematics, in which reducing heterogeneity is particularly important.
- The grouping plan markedly reduces heterogeneity in the *specific skill* being taught.
- Group assignments are flexible and are frequently reassessed.
- Teachers adapt their level and pace of instruction to accommodate students' levels of readiness and learning rates.

The between-class grouping plan that most completely incorporates the four principles listed above is the Joplin Plan. Students remain in heterogeneous classes except for reading, are grouped strictly according to reading level, are constantly re-evaluated, and are taught in a manner that accommodates their achievement levels. In contrast, ability-grouped class assignment does not meet the four criteria. It segregates students all day, groups them on the basis of general ability or achievement rather than skill in a specific subject, and tends to be highly inflexible. Teachers may or may not adjust their level and pace of instruction to adapt to students' needs in this plan.

WITHIN-CLASS ability grouping is the practice of assigning students to homogeneous subgroups for instruction within the class. In general, each subgroup receives instruction at its own level and is allowed to progress at its own rate. Within-class ability grouping is virtually universal in elementary reading instruction and is common in elementary mathematics.

Within-class grouping plans generally conform to the four requirements for effective ability grouping proposed earlier. They involve only reading and/or mathematics, leaving students in relatively heterogeneous classes the rest of the school day. They group students in specific rather than general skills, and, at least in principle, within-class groupings are easy to change. Most teachers do adapt their level and pace of instruction to meet students' needs.

However, within-class ability grouping introduces a problem of its own: management of multiple groups. When the teacher is instructing one reading group, for example, the remaining students must work independently on seatwork activities, which may be of questionable value. Supervising multiple groups and transitions between them are major classroom management problems.

Methodologically adequate research on within-class ability grouping has unfortunately been limited to the study of mathematics grouping, perhaps because few reading teachers would be willing to participate in an experiment in which they had to teach heterogeneous classes without breaking students into homogeneous subgroups for reading. The research on within-class grouping in mathematics supports this practice. Every one of the eight studies of within-class ability grouping in mathematics identified in my review of the literature favored the grouped treatment. For example, in a Kansas study, eight sixth-grade teachers were randomly assigned to teach arithmetic using within-class ability grouping or whole-class instruction. The grouped classes gained an average of almost 50% of a grade equivalent more on a standardized arithmetic test than the ungrouped classes.[9] Effects of within-class grouping have been somewhat higher for low achievers than for average and high achievers, and they tended to be more positive when the number of ability groups was two or three rather than four.

Effects of within-class grouping on mathematics achievement cannot be assumed to hold for reading. In mathematics, there is a need for students to work on problems independently, so there is an appropriate place for independent seatwork. A corresponding need for independent seatwork time is less compelling in reading. However, the universality of within-class grouping in reading provides at least some indication that this form of within-class ability grouping is also instructionally necessary.

Cooperative learning views student heterogeneity as a resource to be taken advantage of rather than as a problem to be solved.

Mastery Learning. This instructional strategy takes three principal forms. In group-based mastery learning, students are taught as a whole class and then take a test on the material covered. Those whose test scores exceed a preset mastery criterion (e.g., 80%) then do enrichment activities while those who do not achieve this criterion receive corrective instruction. Group-based forms of mastery learning are by far the most commonly used in elementary and secondary schools. Mastery learning can also be implemented in an individualized, or continuous-progress, form. Finally, the Keller Plan is also a form of mastery learning in which students take as much time as they need to pass a series of tests covering the content of a course, using self-study materials, peer tutoring, and lectures to prepare to take the tests. The Keller Plan is used almost exclusively at the college level, as it does not fit well within time-driven elementary and secondary programs. Since individualized and Keller Plan forms of mastery learning are rarely seen in elementary and secondary schools, this section only considers research on group-based forms of mastery learning.

I recently completed a review of the research on group-based mastery learning at the elementary and secondary levels.[10] I found that, in studies of at least four weeks' duration that compared mastery learning to control groups, the effects of mastery learning on standardized measures of reading and math achievement were essentially zero. On tests devised specifically for these studies, effects were more positive, but these measures were usually more closely related to the objectives studied by the mastery learning classes than by the control classes. However, mastery learning does tend to reduce the achievement gap between the highest and the lowest achievers, and it provides a means of focusing teachers and students on a well-defined set of objectives.For these reasons, this strategy may be desirable for certain uses. Also, several school district evaluations of mastery learning show promise for the method, although these studies rarely use control groups and confound the use of mastery learning per se with changes in curricula, other teaching methods, promotion policies, and alignment of curriculum with outcome measures.

COOPERATIVE LEARNING refers to various instructional methods in which students work in small, heterogeneous learning groups toward some sort of group goal. This approach differs from within-class ability grouping not only in that cooperative learning groups are small and heterogeneous, but also in that these groups are expected to engage in a great deal of task-focused interaction such as studying together or completing group assignments. In a sense, cooperative learning views student heterogeneity as a resource to be taken advantage of rather than as a problem to be solved; in their cooperative groups, students are expected to share a broad range of perspectives and understandings to help one another master academic content.

Cooperative learning methods vary considerably in their basic structures. Some, such as Jigsaw Teaching[11] and Group Investigation,[12] assign students specific tasks within a larger group task. In others, students work together to complete a common group worksheet or other group product.[13] A third category consists of methods in which students study and are rewarded on the basis of the achievement of all group members.[14] For example, students in Student Teams-Achievement Divisions (STAD) are assigned to four-member heterogeneous teams. The teacher presents a lesson and then students study worksheets together in their teams, attempting to make certain that all team members have mastered the material. Finally, the students are individually quizzed, and teams are rewarded with certificates or other recognition on the basis of the average of their members' quiz scores.

The idea behind cooperative learning is that if stu-

(Continued on page 47)

ABILITY GROUPING AND ITS ALTERNATIVES

(Continued from page 36)

dents are rewarded based on the performance of a group or team, they will be motivated to help and encourage one another to achieve. In a heterogeneous learning group, it is expected that, working among themselves, students will be able to solve problems or organize material presented by the teacher and to transmit the group's understanding to each individual.

Research on cooperative-learning in elementary and secondary schools has shown that the success of this grouping strategy depends on how it is organized. Instructionally effective cooperative-learning methods provide group rewards based on the individual learning of all group members. Student Teams-Achievement Divisions, Teams-Games-Tournaments, Team Assisted Individualization, Cooperative Integrated Reading and Composition, and related methods all provide group rewards based on the sum or average of individual student learning performances.[15] This means that if students wish to succeed as a group, they must focus their efforts on ensuring that every group member has mastered the material being studied. Research has consistently found that these methods increase student achievement in a variety of subjects and grade levels from 3 to 12. In contrast, methodologically adequate studies of cooperative learning methods in which students complete a single group worksheet or other group product have not found positive achievement effects. In addition to their impact on academic achievement, cooperative learning methods have produced several important noncognitive outcomes, including improvements in race relations and self-esteem.

Combining Cooperative Learning and Within-Class Ability Grouping. The most effective forms of cooperative learning for enhancing students' basic skills are two complex methods that combine cooperative learning with within-class ability grouping. These are Team Assisted Individualization (TAI) in mathematics and Cooperative Integrated Reading and Composition (CIRC) in reading, writing, and language arts.[16] In TAI, students work in mixed-ability teams on material appropriate to their levels of math skills. Teammates check one another's work and help one another with problems. In the meantime, the teacher calls up groups of students from among the various teams who are working at the same point in the curriculum. For example, the teacher might call up a decimals group for a lesson on that subject. These students would leave their teams while their teammates continue working on self-instructional material back at the team table. Following the lesson, the students would return to their team areas, and the teacher might call up a fractions group for a lesson, and so on.

The achievement effects of TAI have been extraordinary: In six evaluations, TAI students have gained an average of twice as many grade equivalents as control students in mathematics computations. For example, in one study in inner-city Wilmington, Delaware, intermediate schools, TAI students gained an average of 1.65 grade equivalents in 18 weeks, while control students gained 0.61. Team Assisted Individualization has also been found to have a positive impact on race relations and on attitudes toward mainstreamed peers.

Effects of the Cooperative Integrated Reading and Composition method have been equally favorable. In CIRC, students work in mixed-ability teams on a series of reading activities, including reading aloud to one another and completing activities relating to story structure, reading comprehension, decoding, vocabulary, and spelling. In writing, they engage in peer-response groups in a writing-process model. Achievement gains from the CIRC model have been demonstrated on standardized tests of reading comprehension, language expression, and language mechanics. In a 24-week study, CIRC students gained 64% of a grade equivalent more than control students on these variables. Further, significant improvements were found on oral-reading measures and on ratings of writing samples. Positive effects were found not only for the samples as a whole, but also specifically for students receiving remedial reading (e.g., Chapter 1) and special education services.

MUCH OF the debate about ability grouping over the past half century has revolved around the question of whether instruction must be adapted to students' individual needs. Proponents of ability grouping have always justified this practice on the basis that it gives all students instruction appropriate to their level of readiness. Yet accepting the idea that students need to have material taught at their level does not force us to any particular form of instructional grouping. There are many means of accommodating student differences. The most common of these, ability-grouped class assignment, has been repeatedly found to be ineffective for increasing student achievement, while having the most serious drawbacks of all grouping plans. There are several alternative means of grouping students for instruction that have considerably better evidence of effectiveness, little or no psychological damage, and less segregative potential. These grouping plans include the Joplin Plan, within-class ability grouping, and cooperative learning. Cooperative-learning methods in particular have an integrative effect on students of different ethnic backgrounds working together cooperatively on a routine basis. Studies of cooperative learning in desegregated schools regularly indicate improvement in intergroup relations.

The conclusions drawn in this article will be discomfiting both to those who believe that ability grouping is always appropriate and to those who believe that it is never appropriate. Yet the "always-never" debate has been in progress for decades, and most schools today are using the most potentially harmful form of ability grouping — ability-grouped class assignment. I hope this article will point the way to broader use of grouping strategies that maintain heterogeneous classes but group for specific purposes and brief periods, toward broader use of grouping strategies with little or no potential segregative impact, and toward broader use of cooperative learning methods that view student heterogeneity as a resource rather than a liability. ☐

Most schools today are using the most potentially harmful form of ability grouping—ability-grouped class assignment.

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Using Student Team Learning

Robert E. Slavin

Introduction

I was recently visiting writing classes in elementary schools. One fifth-grade class had written compositions on "My Moment of Glory." As the students read their compositions aloud, I was struck by a common theme: Each described a "moment of glory" as the experience of coming through for a team, or of success of a group. One girl described her "moment of glory" as the time her float won a prize in the Thanksgiving parade. A boy described shooting a basket at the last minute that won the basketball game. None of the students mentioned their individual successes outside of a group as a "moment of glory;" certainly, no one mentioned getting an "A" or "completing a difficult assignment in class."

Succeeding in a group activity is one of the most exhilarating experiences in life. Working with others to attain an important goal is so rewarding because not only do we experience success ourselves, but we help others to do so. As a result, groupmates respect and value one another.

The power of groups working cooperatively to achieve a common goal is apparent in all realms of human activity. Yet in schools, cooperative activities are mostly restricted to the playing field, and are rarely seen in the academic classroom. We notice that students who seem completely unmotivated in class will exert heroic efforts on the softball field or debate team. Consider the differences between the team setting and the traditional classroom setting. In the team, one student's success helps others to achieve their goals. As a result, team members encourage and help one another.

In contrast, in the classroom, one student's success may make it more difficult for others to succeed, by "raising the curve" or raising teachers' expectations of students. As a result, classmates may *discourage* each other's academic efforts, communicating a norm that those who strive to succeed in academics are "teacher's pets" or "nerds." Teamwork is fun, but that is not why teamwork works. Teamwork works because it creates a social and motivational environment that expects and assists maximum effort.

How can the powerful dynamics of team organization be harnessed for use in the classroom? The activity and noise of the playing field are inappropriate in the classroom, and the goals of the academic classroom are quite different from those of the sports team. Yet the essential dynamics of team organization can be successfully transplanted to the classroom setting, and when they are, students will put the kind of effort and commitment into learning and helping each other learn that they put into team sports.

STUDENT TEAM LEARNING

This teacher's manual describes a set of practical instructional techniques that involve students in cooperative activities built around the learning of school subjects. These are techniques developed and researched at Johns Hopkins University, plus related methods developed elsewhere. They are not one-time activities designed to liven up the classroom from time to time, but are alternatives to traditional instruction that can be used as permanent means of organizing the classroom to effectively teach a wide variety of subjects at any grade level from two through college.

Student Team Learning methods are not the only cooperative learning techniques in widespread use (see "Other Cooperative Learning Methods.") They share with other cooperative learning methods the idea that students work together to learn and are responsible for their groupmates' learning as well as their own. However, Student Team Learning methods emphasize the use of team goals and team success which can only be achieved if all members of the team learn the objectives being taught. That is, in Student Team Learning the students' tasks are not to *do* something as a team but to *learn* something as a team. The team's work is not done until all team members have mastered the material being studied.

Three concepts are central to all Student Team Learning methods: *team rewards, individual accountability,* and *equal opportunities for success.* In all Student Team Learning techniques, teams may earn certificates or other *team rewards* if they achieve at or above a designated criterion. The teams are not in competition to earn scarce rewards; all (or none) of the teams may achieve the criterion in a given week. *Individual accountability* means that the team's success depends on the individual learning of all team members. This focuses the activity of the team members on tutoring one another and making sure that everyone on the team is ready for a quiz or other assessment which students will take without teammate help. *Equal opportunities for success* means that students contribute to their teams by improving over their own past performance. This ensures that high, average, and low achievers are equally challenged to do their best, and the contributions of all team members will be valued.

Research on cooperative learning methods (summarized later in this manual) has indicated that team rewards and individual accountability are essential elements for producing basic skills achievement. It is not enough to simply tell students to work together; they must have a reason to take one another's

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achievement seriously. Research further indicates that if students are rewarded for doing better than they have in the past, they will be more motivated to achieve than if they are rewarded based on their performance in comparison to others, because rewards for improvement make success neither too difficult nor too easy for students to achieve.

STUDENT TEAM LEARNING METHODS

Four principal Student Team Learning methods have been extensively developed and researched. Two are general cooperative learning methods adaptable to most subjects and grade levels: Student Teams—Achievement Divisions, or STAD, and Teams-Games-Tournament, or TGT. The remaining two are comprehensive curricula designed for use in particular subjects at particular grade levels: Team Accelerated Instruction (TAI) for mathematics in grades 3-6, and Cooperative Integrated Reading and Composition (CIRC) for reading and writing instruction in grades 3-5. These four methods all incorporate team rewards, individual accountability, and equal opportunities for success, but in different ways.

Student Teams Achievement Divisions (STAD). In STAD, students are assigned to four-member learning teams that are mixed in performance level, sex, and ethnicity. The teacher presents a lesson, and then students work within their teams to make sure that all team members have mastered the lesson. Finally, all students take individual quizzes on the material, at which time they may not help one another.

Students' quiz scores are compared to their own past averages, and points are awarded based on the degree to which students can meet or exceed their own earlier performance. These points are then added to form team scores, and teams which meet certain criteria may earn certificates or other rewards. The whole cycle of activities, from teacher presentation to team practice to quiz, usually takes 3-5 class periods.

STAD has been used in every imaginable subject, from mathematics to language arts to social studies, and has been used from grade two through college. It is most appropriate for teaching well-defined objectives with single right answers, such as mathematical computations and applications, language usage and mechanics, geography and map skills, and science concepts.

The main idea behind Student Teams—Achievement Divisions is to motivate students to encourage and help each other master skills presented by the teacher. If students want their team to earn *team rewards*, they must help their teammates to learn the material. They must encourage their teammates to do their best, expressing norms that learning is important, valuable, and fun. Students work together after the teacher's lesson. They may work in pairs and compare answers, discuss any discrepancies, and help each other with any roadblocks. They may discuss approaches to solving problems, or they may quiz each other on the content they are studying. They teach their teammates and assess their strengths and weaknesses to help them succeed on the quizzes.

Although students study together, they may not help each other with quizzes. Every student must know the material. This *individual accountability* motivates students to do a good job tutoring and explaining to each other, as the only way for the team to succeed is if all team members have mastered the information or skills being taught. Because team scores are based on students' improvement over their own past records *(equal opportunities for success)*, all students have the chance to be the team "star" in a given week, either by scoring well above their past record or by getting a perfect paper, which always produces a maximum score regardless of students' past averages.

STAD is a general method of organizing the classroom rather than a comprehensive method of teaching any particular subject; teachers use their own lessons and other materials. Worksheets and quizzes are available for most school subjects for grades 3-9 (see Appendix 9), but most teachers use their own materials to supplement or replace these materials.

Teams-Games-Tournaments (TGT). Teams-Games-Tournament, originally developed by David DeVries and Keith Edwards, was the first of the Johns Hopkins cooperative learning methods. It uses the same teacher presentations and team work as in STAD, but replaces the quizzes with weekly tournaments, in which students compete with members of other teams to contribute points to their team scores. Students compete at three-person "tournament tables" against others with similar past records in mathematics. A "bumping" procedure keeps the competition fair. The winner at each tournament table brings sixty points to his or her team, regardless of which table it is; this means that low achievers (competing with other low achievers) and high achievers (competing with other high achievers) have *equal opportunities for success*. As in STAD, high-performing teams earn certificates or other forms of *team rewards*.

TGT has many of the same dynamics as STAD, but adds a dimension of excitement contributed by the use of games. Teammates help one another prepare for the games by studying worksheets and explaining problems to one another, but when students are competing their teammates cannot help them, ensuring *individual accountability*. The same materials used in STAD are also used in TGT: the STAD quizzes are used as games in TGT. Many teachers prefer TGT because of its fun and activity, while others prefer the more purely cooperative STAD, and some combine the two.

Team Accelerated Instruction (TAI). Team Accelerated Instruction or Team Assisted Individualization* (Slavin, Leavey, & Madden, 1986) shares with STAD and TGT the use of four-member mixed ability learning teams and certificates for high-performing teams. But where STAD and TGT use a single pace of instruction for the class, TAI combines cooperative learning with individualized instruction. Also, where STAD and TGT apply to most subjects and grade levels, TAI is specifically designed to teach mathematics to students in grades 3-6 (or older students not ready for a full algebra course).

In TAI, students enter an individualized sequence according to a placement test and then proceed at their own rates. In general, team members work on different units. Teammates check each others' work against answer sheets and help one another with any problems. Final unit tests are taken without teammate help and are scored by student monitors. Each week, teachers total the number of units completed by all team members and give certificates or other *team rewards* to teams which exceed a criterion score based on the number of final tests passed, with extra points for perfect papers and completed homework.

Because students take responsibility for checking each others' work and managing the flow of materials, the teacher can spend most class time presenting lessons to small groups of students drawn from the various teams who are working at the same point in the mathematics sequence. For example, the teacher might call up a decimals group, present a lesson on decimals, and then send the students back to their teams to work on decimal problems. Then the teacher might call the fractions group, and so on.

TAI has many of the motivational dynamics of STAD and TGT. Students encourage and help one another to succeed because they want their teams to succeed. *Individual accountability* is assured because the only score that counts is the final test score, and students take final tests without teammate help. Students have *equal opportunities for success* because all have been placed according to their level of prior knowledge; it is as easy (or difficult) for a low achiever to complete three subtraction units in a week as it is for a higher-achieving classmate to complete three long division units.

However, the individualization that is part of TAI makes it quite different from STAD and TGT. In mathematics, most concepts build on earlier concepts. If the earlier concepts were not mastered, the later ones will be difficult or impossible to learn—a student who cannot subtract or multiply will fail to master long division, a student who does not understand fractional concepts will fail to understand what a decimal is, and so on. In TAI, students work at their own levels, so if they lack prerequisite skills they can build a strong foundation before going on. Also, if students can learn more rapidly, they need not wait for the rest of the class.

Individualized mathematics instruction has generally failed to increase student mathematics achievement in the past (see Miller, 1976; Schoen, in press), probably because the teacher's time in earlier models was entirely taken up with checking work and managing materials, leaving little time for teaching. In TAI, students handle the routine checking and management, so the teacher can spend most class time teaching. This difference, plus the motivation and help provided by students in their cooperative teams, probably account for the strong positive effects of TAI on student achievement in contrast to the effects of earlier individualized programs.

Cooperative Integrated Reading and Composition (CIRC). The newest of the Student Team Learning methods is a comprehensive program for teaching reading and writing in the upper elementary grades (Madden, Stevens, & Slavin, 1986). In CIRC, teachers use basal readers and reading groups, much as in traditional reading programs. However, students are assigned to teams composed of pairs of students from two different reading groups. While the teacher is working with one reading group, students in the other groups are working in their pairs on a series of cognitively engaging activities, including reading to one another, making predictions about how narrative stories will come out, summarizing stories to one another, writing responses to stories, and practicing spelling, decoding, and vocabulary. Students work in teams to master main idea and other comprehension skills. During language arts periods, students engage in writing drafts, revising and editing one another's work, and preparing for publication of team or class books.

In most CIRC activities, students follow a sequence of teacher instruction, team practice, team pre-assessments, and quiz. That is, students do not take the quiz until their teammates have determined that they are ready. *Team rewards* are certificates given to teams based on the average performance of all team members on all reading and writing activities. Because students work on materials appropriate to their reading levels, they have *equal opportunities for success.* Students' contributions to their teams are based on their quiz scores and final independently written compositions, which ensures *individual accountability.*

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*TAI was originally researched under the name Team Assisted Individualization. However, it is currently being marketed as Team Accelerated Instruction, and this is the name used in this manual.

A Day in the Life of Sara Cooper

To illustrate what goes on in Student Team Learning classes, let's follow a hypothetical student through a day as she experiences three of the Student Team Learning methods: STAD, CIRC, and TAI.

Sara Cooper is an average fifth grader at Hooperville Elementary School. The principal and teachers at Hooperville Elementary decided to make cooperative learning the centerpiece of an effort to improve their school, so teachers throughout the school are using a variety of Student Team Learning methods. Sara's teacher, Ms. Jackson, has decided to use STAD to teach spelling, CIRC in reading and writing/language arts, and TAI in mathematics.

Sara is on the same team for all three Student Team Learning methods. Her team, the Masterminds, has four students on it: Sara, Luis, John, and Tamika. These students sit as a team, with their desks pulled together, throughout the day.

STAD. The first subject today is spelling. Yesterday, Ms. Jackson taught a lesson on forming possessives to the whole class. As today's period begins, the students in all the teams work together to practice the new skill. Ms. Jackson distributes worksheets and worksheet answers to the teams, and announces that students will have thirty minutes to study before taking a quiz.

The worksheets consist of thirty phrases, such as "the hair of the dog," which students are to restate using possessives (i.e., "the dog's hair"). Within the Masterminds team, Sara and Luis have decided to work as a pair, while John and Tamika work together.

The first item is "the book of the boy." Luis says, "That's easy. You just put an *apostrophe s* after boy." Sara agrees, and she writes "the boy's book" on the worksheet. Luis checks the answer sheet, which is face down on his desk, and confirms that they were right.

On the next item, Sara and Luis have a problem. The next item is: "the horns of the cars." Sara starts, "Isn't that just *the car's horns?*"

Luis thinks for a moment. "No, it's more than one car," he says. "It's plural, so you put the apostrophe after the *s*."

"I guess you're right," says Sara. "So it would be *the cars' horns.*" Luis writes the answer on the worksheet and Sara checks the answer sheet to confirm they were right.

The next item stumps both partners: "The toys of the children." Luis suggests that since *children* is plural, they should add *s'* to make *the childrens' toys*, but Sara recalls that Ms. Jackson warned them about plurals that do not end in *s*. They ask John and Tamika for help.

Tamika says, "We just got up to that one ourselves. Ms. Jackson said you add *apostrophe s.*"

Luis still thinks he's right. "*Cars'* was plural, so why should *childrens'* be any different?

"Because the apostrophe always goes right after the main word," John explains. "Then you add an s if there isn't already one there. That's why it's got to be *children's*, because the main word is *children*."

"I think you're right," admits Luis.

They check the answer sheet and see that *the children's toys* is correct.

Ms. Jackson, who has been listening in on the team's discussion, comes over to compliment the team on how well they are working together. "You are all doing such a good job of explaining to each other," she says. "If you can keep it up, I'm sure you will be a Superteam in spelling this week!"

At the end of thirty minutes, most of the teams have completed the worksheets and Ms. Jackson asks the students to stop work and move their desks apart. She then hands out a ten-item quiz, which students do on their own. When everyone has finished, Ms. Jackson has students exchange papers with non-teammates, reads off the answers, and has students mark the papers and return them to their owners.

"Wow!" says Sara after the students have all passed their papers up to Ms. Jackson to be rechecked. "We all got nine or ten right. I'm sure we'll be a Superteam this week!"

CIRC. The next period is reading. Sara and Tamika are in one reading group, the "Rockets," while John and Luis are in the "Stars" reading group. The class is starting on new stories in their basal readers. Ms. Jackson calls up the "Stars" for their reading group lesson. John and Luis take their chairs to the reading group area, while Sara and Tamika stay at their desks. They have an Assignment Record Form which tells them everything they need to do in their teams over the course of the week. While they are waiting for the "Rockets" reading group to be called, they work together on vocabulary exercises relating to their new story. Meanwhile, Ms. Jackson is introducing the new story to the "Stars" group, setting a purpose for reading, introducing new vocabulary words, and having students make predictions on what the story might be about, based on the title, headings, vocabulary words, and pictures. When Ms. Jackson has completed the lesson, the "Stars" return to their team areas and the "Rockets" are called together for their lesson.

When the students return to their teams, they read half of their story silently, and then read the same half aloud to their partners, alternating paragraphs. The students read in soft voices so only their partners can hear them. When students make errors, their partners give them the correct word.

After Ms. Jackson has seen all the reading groups, she circulates among the teams to listen to students read. She hasn't heard John for a while, so she spends some time listening to him reading with Luis, and praises both students for doing a good job helping each other.

When they complete their reading of the first half of the stories, the partners work together on a "Treasure Hunt" activity. The "treasures" are the elements always present in a narrative—characters, setting, problems to be solved, and solutions to problems. The partners jointly identify the characters, settings, and problems, and then discuss predictions about how they think the problems will be resolved. Sara and Tamika have just read the first half of "The Emperor's New Clothes," by Hans Christian Andersen. They had no trouble identifying the main character (the Emperor) or the setting (his castle and surrounding kingdom). However, they were puzzling over one of the Treasure Hunt questions: "What was it about the Emperor that kept him from catching on to the weavers' trick?"

"I guess he didn't want anyone to know he wasn't fit to be the king," Tamika says.

"Yeah, but why didn't he just throw them out? He's the Emperor!"

"I think you're right—we have to figure out why he believed the weavers in the first place," replies Tamika. "Let's look at the beginning of the story again to see what he was like."

"He spent all his time and money on clothes and didn't care about anything else," says Sara. "I'll bet he was so greedy and liked clothes so much that it was easy for the weavers to fool him."

"Especially when his Minister said he could see the cloth," adds Tamika.

Sara and Tamika write their answers to the question and continue to the end of the first section of the Treasure Hunt. As always, the final question involves a prediction: "How do you think the story will turn out? Will the weavers get away with their trick or will the Emperor catch on?"

"He won't catch on," states Sara. "He's too stuck-up and he's afraid that people will think he's not fit to be Emperor."

"But maybe someone's going to tell him he doesn't have clothes on," says Tamika.

"I don't think so," Sara replies. "Anyone who says they don't see the cloth could get into trouble."

"*Somebody* has got to say something. Maybe a kid or some weirdo who doesn't know he's not supposed to laugh."

Sara and Tamika agree to disagree about their predictions. Sara writes and justifies her prediction and Tamika does the same.

Tomorrow Ms. Jackson will discuss students' predictions and Treasure Hunts in the reading groups. Later in the week, the students will complete their reading and Treasure Hunts and ultimately will take tests on the story content, vocabulary words, and oral reading, and will write a follow-up paragraph on some aspect of the story. Following that they will receive a special reading comprehension lesson and practice reading comprehension skills in their teams. All of these activities will count toward their teams' success in reading, and teams that meet high criteria will earn certificates. The Masterminds usually earn Goodteam or Greatteam certificates, but this week they have resolved that they are going to put in extra effort to earn a Superteam certificate, the highest honor of all.

After reading comes writing/language arts period. The students are in the writer's workshop part of the program, in which they write on topics of their own choice, revise and edit their compositions with the help of teammates and the teacher, and finally share their compositions with the class and publish them in team and/or class books. Today, Ms. Jackson begins with a ten-minute mini-lesson to the whole class on "*and* disease," the tendency many students have to write long, boring sentences linked by many "ands." Following the mini-lesson, the students begin working on their compositions. Sara is just completing the first draft of a composition on the time her cat, Tinky, had kittens in a drawer. Her teammates are working on their own compositions, and are at various points in the plan-draft-revise-edit-publish sequence.

Early in the period, Sara finishes her draft. "O.K. guys," she says to her teammates, "I'm ready to read my composition." She reads it through.

"I like it," says Luis when Sara finishes. "I especially liked the part when you couldn't find Tinky and ran all over the house."

"I didn't understand why you couldn't find Tinky," John frowns.

"Well," says Sara, "she was supposed to be in a special box with old clothes in it, but she wasn't there."

"You went to all this trouble to get a special place for Tinky to have her babies and then she goes and has them in a drawer!" says Tamika. "You should say something about the special place in your story."

"That's a good idea," says Sara. "I think I know just where to put it, too."

"You started the story with how you got Tinky at the animal shelter," says John. "But then the rest of the story is about having kittens. Can you say more about how that is important to the story?"

"Well, that's how we got Tinky in the first place."

"Maybe you should tell us at the beginning that the story is about having kittens," says Luis.

"I know!" says Sara. "I'll start it with, 'The big day had come at last!' Then I can talk about how we got everything ready for Tinky to have kittens."

"Great idea!" says Tamika. "That would grab the reader's interest better!"

"Thanks, guys," says Sara. "I'll try this out and read you my next draft later."

While the Masterminds are helping Sara with her composition, Ms. Jackson is meeting with students on other teams to review their work and suggest changes. In some cases, when she sees a particular problem that is holding a student back, she explains skills or concepts. For example, John is writing a composition about a big, mean, ugly, one-eyed, hairy monster, but he is shaky about where to put commas in a series. Later in the period, Ms. Jackson will spend five minutes with John to go over this skill in the context of his own composition. If Ms. Jackson sees several students with similar problems, she will make a note to devote a mini-lesson to that skill for the class as a whole.

TAI. After lunch and recess, it's time for TAI math. At the beginning of the period, Ms. Jackson announces who the monitors will be for the day. The students get out their Student Books and start working where they left off the previous day. Tamika is working on Ratio and Percent, Sara and Luis on Decimals, and John on Advanced Fractions. When all students have started to work, Ms. Jackson calls up the Advanced Fractions group for a lesson, while the rest of the students keep working in their team areas.

Sara is starting a unit on decimal inequalities. After reading the Guidepage, which reviews the concepts Ms. Jackson presented the previous day to the Decimals group, Sara tries the first four problems on Skill Practice 1:

1) .600 ? .006 2) .080 ? .08
3) .009 ? .09 4) .10 ? .010

Sara copies the problems on notebook paper, replacing the question mark with "=" or "≠". Then she asks Tamika to check her work. Sara's book has the answers in the back, and she has the place marked with a bookmark. Tamika quickly checks her problems and tells her they're all correct.

Sara moves to Skill Practice 2 and tries the first four problems:

1) .69 ? .70 2) .124 ? .012
3) 4.01 ? 4.10 4) .017 ? .160

Sara replaces the "?" with > or <. She has Tamika check her work. This time she missed Problem #4.

"What's wrong?" Sara asks Tamika. "Seventeen is more than sixteen, so .017 is more than .160."

"Look at where the decimal point is," says Tamika. "Is seventeen thousandths more than one hundred sixty thousandths?"

"I guess not," Sara admits. "So I have to look at the decimal point first before I look at the numbers. I'll try it on the next four."

Sara works problems 5-8 on Skill Practice 2, and this time Tamika tells her they're all correct. Sara then passes Skill Practice 3 and goes on to the Formative Test. In the meantime, Ms. Jackson has finished her lesson to the Advanced Fractions group and has called up Tamika's group (Ratio and Percent) for a lesson on time, rate, and distance problems using ratios. When Sara finishes her Formative Test, John checks it, and signs at the bottom of her paper to indicate that she's ready for the Unit Test. Sara shows her signed paper to the student monitor, and he gives her the Unit Test, which she takes at a special testing table at the back of the class. When she finishes, she returns the test to the monitor and he checks it against an answer book. "Congratulations!" he says. "You got fourteen out of fifteen right. Go put your score up on your Team Summary Sheet!"

Sara does so, and sees that her team is making good progress and might make Superteam in math by the end of the week. She goes back to the Masterminds to tell them the good news.

At the end of the day, Sara reflects on how much fun school has become since Hooperville Elementary began using Student Team Learning. "We still get to learn from the teacher, but we also get to learn from each other," she thinks. "I sure am glad Ms. Jackson lets us work in teams!"

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RESEARCH ON STUDENT TEAM LEARNING

Academic Achievement

The principal goal of Student Team Learning is to accelerate the achievement of all students, and the results of the research on these methods consistently indicates that this goal has been achieved. Table 1 lists the major characteristics and achievement outcomes of thirty-five studies of Student Team Learning methods. Twenty-nine of these (83%) found that students in Student Team Learning classes gained significantly more in achievement than did students in traditionally taught classes studying the same objectives. None found differences favoring control groups. The methodological quality of the studies is very high: most used random assignment to experimental and control groups, standardized achievement measures, and other means of ensuring the objectivity and reliability of the findings. The studies took place in urban, rural, and suburban schools all over the U.S and in three foreign countries, and involved a wide range of subjects and grade levels. With few exceptions, effects of Student Team Learning methods have been equally strong for students high, average, and low in achievement level, in urban, rural, and suburban schools.

Of eighteen studies of STAD and closely related methods, 14 found significantly higher achievement for this method than for traditional instruction, and four found no differences. For example, Slavin & Karweit (1984) used STAD over an entire school year in inner-city ninth grade mathematics classes. Student performance on a standardized mathematics test increased significantly more than in either a mastery learning group or a control group using the same materials. Substantial differences favoring STAD have been found in such diverse subjects as social studies (e.g., Allen and Van Sickle, 1984), language arts (e.g., Slavin and Karweit, 1981), science (Okebukola, 1985), and spoken English as a foreign language (Sharan et al., 1984), as well as in other studies of mathematics (e.g., Sherman and Thomas, 1986). Ten of twelve studies of TGT found similar results (DeVries and Slavin, 1978).

Some of the largest effects of Student Team Learning methods have been found in studies of TAI. Five of six studies found substantially greater learning of mathematics computations in TAI than in control classes, while one study found no differences (Slavin, 1985a). Across all six studies, the TAI classes gained an average of twice as many grade equivalents on standardized mathematics computations measures as traditionally taught control classes. For example, in one eighteen-week study in Wilmington, Delaware, the control group gained .61 grade equivalents in mathematics computations, while the TAI classes gained 1.65 grade equivalents (Slavin and Karweit, 1985). These experimental-control differences were still substantial (though smaller) a year after the students were in TAI.

Two studies of CIRC (Madden, Stevens, & Slavin, 1986; Stevens, Madden, & Slavin, 1986) found substantial positive effects of this method on standardized tests of reading comprehension, reading vocabulary, language expression, language mechanics, and spelling in comparison to traditional control groups. The CIRC classes gained thirty to seventy percent of a grade equivalent more than control classes on these measures in both studies.

As noted earlier, research on Student Team Learning methods has revealed that two elements are critical to the effectiveness of cooperative learning for learning of basic skills: *group rewards* and *individual accountability* (Slavin, 1983b). That is, there must be some reward given to groups based on the achievement of their members, and there must be no way for students to ride on their teammates' coattails: every student's learning must be important to the team. If students arrive at a single group solution to problems or complete one group worksheet, there is a danger that more able students will do all the work and provide answers rather than explanations to their groupmates. Cooperative learning methods in which students are simply asked to work with one another without any group goal, or in which students complete a single worksheet or group solution, have not been more (or less) effective than traditional teaching in increasing student achievement in basic skills (see Slavin, 1983b).

Integrating the Desegregated Classroom. One of the most important effects that Student Team Learning has is on friendships among students of different ethnic backgrounds in desegregated classes. Anyone who has spent much time in a desegregated school, especially at the junior or senior high school level, knows that white students associate mostly with white students, black students associate mostly with black students, Hispanic students with Hispanic students, and so on. Seeing this is always a blow to those who hoped that widespread desegregation would lead to greatly increased contact, and thereby respect and liking, among students of different ethnic backgrounds.

In several studies in which Student Team Learning was *not* used, beginning seventh graders in traditionally structured, racially mixed classes were asked to name their friends. When the question was repeated a semester later, the proportion of black students who named white students as their friends and white students who named black students either stayed the same or actually decreased. Many other researchers have found the same discouraging pattern (see Gerard and Miller, 1975). Apparently, simply assigning black and white students to the same classes does not increase friendship across racial lines.

Table 1. Research on Achievement Effects of Student Team Learning

Study	Location	Grade Levels	Duration (Weeks)	Subject Area(s)	Achievement Effects
Student Teams Achievement Divisions					
Slavin, 1978	Rural East	7	10	Language Arts	0
Slavin, 1977	Urban East	7	10	Language Arts	+
Slavin, 1980	Rural East	4	12	Language Arts	+
Slavin, 1979	Urban East	7-8	12	Language Arts	0
Slavin & Oickle, 1981	Rural East	6-8	12	Language Arts	+
Lew & Bryant, 1981	Suburban East	4	9	Spelling	+
Allen & Van Sickle, 1981	Rural South	6	9	Geography	+
Slavin & Karweit, 1981	Rural East	4-5	16	Language Arts	+
Lew et al., 1983	Suburban East	9	9	English	+
				Social Studies	+
				Science	+
Madden & Slavin, 1983	Urban East	6	6	Mathematics	+
Huber et al., 1982	Urban Germany	7	3	Mathematics	+
Sharan et al., 1984	Urban Israel	7	16	English as a Second Language	+
Kagan et al., 1985	Urban California	2-6	6	Spelling	0
Slavin & Karweit, 1984	Urban East	9	30	Mathematics	+
Davis, 1985	Urban California	4-6	8	Spelling	0
Sherman & Thomas, 1986	Rural Midwest	9-10	5	Mathematics	+
Mevarech, 1985	Urban Israel	5	15	Mathematics	+
Okebukola, 1985	Rural Nigeria	8	6	Science	+
Teams Games Tournament (TGT)					
Edwards et al., 1972	Urban East	7	9	Mathematics	+
Edwards & DeVries, 1972	Urban East	7	4	Mathematics	0
Edwards & DeVries, 1974	Urban East	7	12	Mathematics	+
				Social Studies	0
Hulten & DeVries, 1976	Urban East	7	10	Mathematics	+
DeVries et al., 1974	Suburban South	10-12	12	Social Studies	+
DeVries & Mescon, 1975	Suburban East	3	6	Language Arts	+
DeVries et al., 1975a	Suburban East	3	6	Language Arts	+
DeVries et al., 1975b	Suburban East	3	5	Analogies	+
DeVries et al, 1979	Suburban Midwest	7-8	10	Language Arts	+
Slavin & Karweit, 1981	Rural East	4-5	16	Mathematics	0
Kagan et al., 1985	Urban California	2-6	6	Spelling	+
Okebukola, 1985	Rural Nigeria	8	6	Science	+
Team Accelerated Instruction (TAI)					
Slavin et al., 1984					
Experiment 1	Suburban East	3-5	8	Mathematics	+
Experiment 2	Suburban East	4-6	10	Mathematics	+
Slavin et al., 1984a	Suburban East	3-5	24	Mathematics	+
Oishi et al., 1983	Urban East	4-6	16	Mathematics	0
Slavin & Karweit, 1985					
Experiment 1	Urban East	4-6	18	Mathematics	+
Experiment 2	Rural East	3-5	16	Mathematics	+
Cooperative Integrated Reading & Composition (CIRC)					
Madden et al., 1986	Suburban East	3-4	12	Reading	+
				Language Arts	+
				Writing	+
Stevens et al., 1986	Suburban East	3-4	24	Reading	+
				Language Arts	+
				Writing	+

Key:
+ Student Team Learning classes significantly exceeded control in achievement
0 Student Team Learning and control classes not significantly different in achievement

Student Team Learning is an obvious solution to the problem of integrating the desegregated classroom. We know from decades of research that when people work together for a common goal, they gain in respect and liking for one another. When Student Team Learning techniques were applied in desegregated classrooms, that is exactly what was found (see Slavin, 1985b). In three studies, TGT students increased the number of friends they named of a different ethnic group far more than did control students (DeVries, Edwards, and Slavin, 1978). Five additional studies (Slavin, 1977c; Slavin, 1979; Slavin and Oickle, 1981; Kagan et al., 1985; Sharan et al., 1985) found STAD to have the same effect. In fact, in many of these studies, the Student Team Learning students began to choose their classmates as friends as though ethnicity were not a barrier to friendship at all. This never happened in the control classes. One of the STAD studies (Slavin, 1979) included a followup of the intergroup friendship measures several months after the studies ended and found that there were still more cross-ethnic friendships made by students who had been in the Student Team Learning classes than were made by control students. Two studies of TAI found that this method also increases liking and respect between black and white students (Oishi, 1983; Oishi et al, 1983).

Mainstreaming. Ethnicity is a major barrier to friendship, but it is not as large as the one between physically or academically handicapped students and their normal-progress peers. Public Law 94-142 has mandated that as many students as possible be placed in regular classrooms. This has created an unprecedented opportunity for handicapped students to take their place in the mainstream of society, but it has also created enormous practical problems for classroom teachers and often leads to social rejection of the handicapped students.

Once again, Student Team Learning is an answer. In the Student Team Learning classroom, mainstreamed students are assigned to teams the same way other students are. If these students are physically handicapped, their classmates come to value the contribution they make to the team, but above all they come to see them as important individuals, not just as "crippled." If the mainstreamed students are academically handicapped, the opportunity they have to contribute points to their teams if they show improvement (STAD, CIRC, and TAI) or if they succeed in competition with others of similar levels of performance (TGT) also makes these students valued by their teammates. The teamwork makes them "one of the gang" instead of separate and odd, and provides them with teammates who encourage and assist their academic progress.

The research on Student Team Learning and mainstreaming has focused on the academically handicapped child. In one study, STAD was used to attempt to integrate students performing two years or more below the level of their peers into the social structure of the classroom. The use of STAD significantly reduced the degree to which the normal-progress students rejected their mainstreamed classmates, and increased the academic achievement and self-esteem of all students, mainstreamed as well as normal-progress (Madden and Slavin, 1983). Similar results have been found for TAI (Slavin, Madden, and Leavey, 1984b; Slavin, 1984).

Liking of Others and Liking of Self. One of the most important aspects of a student's personality is his or her self-esteem. Many people have assumed that self-esteem is a relatively stable personal attribute which schools have little ability to change. However, several of the researchers working on Student Team Learning techniques have found that teams do increase students' self-esteem. Students in Student Team Learning classes have been found to like themselves more than do students in traditional classes. These improvements in self-esteem have been found for TGT (DeVries, Lucasses, & Shackman, 1979), for STAD (Madden and Slavin, 1983) and for STAD and TGT combined (Slavin & Karweit, 1981), as well as for TAI (Slavin et al., 1984a; Slavin & Karweit, 1985). Why does this occur? First, it has been consistently found that TGT and STAD students report that they like others and feel liked by others more than control students do (Slavin, 1983a). Liking of others and feeling liked by others are obvious components of feeling worthwhile.

Second, it seems likely that students feel (and are) more successful in their school work when they work in teams. This could also lead to an increase in self-esteem. Whatever the reason, the effect of Student Team Learning on self-esteem may be particularly important for long-term effects on mental health. A student who has had a cooperative, mutually supportive experience in school may be less likely to be antisocial, withdrawn, or depressed in later life. We have only scratched the surface in understanding what kinds of long-term benefits for mental health might result from long-term experience of cooperative learning teams.

Other Outcomes. In addition to students' achievement, positive intergroup relations, acceptance of mainstreamed classmates, liking of others, and self-esteem, effects of Student Team Learning have been found on a variety of other important educational outcomes. One of those is increased positive interaction among emotionally disturbed adolescents (Slavin, 1977d). Others include liking of school, peer norms in favor of doing well academically, students' feeling that they have control over their own fates in school, and student cooperativeness and altruism (see Slavin, 1983a). TGT (DeVries and Slavin, 1978) and STAD (Slavin, 1978) have been found to have positive effects on students' time on-task, a variable that is coming to take on increasing importance as educators become more concerned about the productivity of schools. What is striking about the research on various cooperative learning methods is the breadth of outcomes associated with them. There are many educational methods that have been found to improve student achievement, a few that improve intergroup relations, mainstreaming, or student self-esteem, but how many educational methods can claim to have documented positive effects on such a variety of student outcomes in well-controlled field experiments in schools? Positive effects on all variables measured are not found in every Student Team Learning study, but negative effects are almost never found, and the ratio of significantly positive to equal findings on the major variables (achievement, intergroup relations, self-esteem) is about two-to-one (Slavin, 1983a).

The following sections of this manual present guides to the use of Student Teams-Achievement Divisions (STAD) and Teams-Games-Tournament (TGT). For information on training and materials for STAD, TGT, TAI, CIRC, and other cooperative learning methods, see Appendix 9 at the end of the manual.

CENTER FOR
RESEARCH ON
ELEMENTARY &
MIDDLE SCHOOLS

THE JOHNS HOPKINS UNIVERSITY

CREMS

DECEMBER 1987

Research Identifies Effective Programs for Students At Risk of School Failure

A multitude of our nation's students are at risk.

Of dropout, of pregnancy, of delinquency, of substance abuse, of unemployment and underemployment, of suicide, of school failure. At risk.

Programs abound in schools to address these students. Dropout prevention programs, sex education programs, delinquency prevention programs, vocational training programs, alternative school programs, counseling programs -- each picks out a piece of the at-risk student problem.

The Center for Research on Elementary and Middle Schools works to address these immediate problems, but also sees clearly that a common thread winds its way through each -- poor academic performance in school, usually from the early years onward.

Given this common thread, a scenario emerges. If schools could improve the academic performance of at-risk students beginning in the early years and continuing through the elementary grades, this improvement would have multiple positive effects on student dropout, delinquency, pregnancy, substance abuse, and other behaviors. Thus early improvement of poor academic performance could greatly alleviate multiple aspects of the overall problem.

A two-step process could help schools improve the performance of at-risk students from the early grades on. First, identify programs in the early grades that have been rigorously evaluated and proved to be effective for at-risk students -- programs that *improve the academic performance* of at-risk students.

Second, implement these programs as faithfully as possible in preschool, kindergarten, and each elementary grade level, so that at-risk students, at each level of their schooling, receive effective instruction day after day and year after year.

If we want to determine the results of these efforts, of course, we need to add a third

INSIDE ...

Teacher Practices of Parent Involvement

The TIPS Process

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step -- extensive evaluation of the effects of the effective programs in widespread practice.

CREMS researchers have taken the first step. CREMS reviews of research have identified programs from preschool through elementary that offer strong evidence of effectiveness in improving the academic performance of at-risk students.

Effective Pre-School Programs

CREMS researcher Nancy Karweit reaches a general conclusion in her examination of preschool effects -- overall, preschool in itself improves the academic performance of at-risk children.

Karweit reviews existing studies of the short- and long-term effects of preschool attendance for at-risk students. She focuses on studies which evaluated programs for four-year-olds and which used an acceptable research design.

Her review concludes that preschool has robust effects on immediate tests of cognitive functioning, and has longer term effects on other variables related to school success -- lower rates of grade repetition, referral to special education, and dropping out of high school. She finds inconsistent effects of preschool attendance on achievement in upper elementary school.

Karweit's research also addresses the question -- are some specific kinds of preschool programs more effective than others for at-risk children? She examines three studies that compare the outcomes of different curricula. Two of the studies found no consistent differences due to participation in programs that differ in curricula.

> *"CREMS reviews ... have identified programs from preschool through elementary that offer strong evidence of effectiveness in improving the academic performance of at-risk students."*

The third study -- the Curriculum Demonstration Program of High/Scope -- compared the longitudinal effects of an academic preschool program, a cognitively oriented program, and a traditional nursery school program, along with a control group. Effects on student achievement and academic progress were found for all three types of programs, and no one program was significantly more effective than the other two.

This study also implied that the academic preschool program showed later links to increased delinquency. But this finding is not supported by other studies, Karweit notes, and the self-report delinquency scales that produced the finding are suspect.

Karweit's conclusion: The research finds that the preschool programs studied, in themselves, are effective for improving the academic performance of children at risk, as well as showing other benefits. But a major caveat accompanies this conclusion.

"The programs implemented in these studies shared some common features," Karweit says. "A small teacher-child ratio, for example, and sizeable funding. We can't say that widespread implementation by schools of preschool programs that don't share these common characteristics will have the same effects. That's the question we now need to answer."

Effective Kindergarten Programs

A previous synthesis of research by Karweit established that full-day kindergarten programs, compared to half-day programs, improved the academic performance of students at risk. (See CREMS *Report*, June, 1987.) Now she has identified specific kindergarten programs that present convincing evidence that they improve the academic achievement of children who are at risk of school failure.

She defines a "program" as a set of procedures intended to be implemented as a total package and capable of being replicated by others, and she identifies six programs that present convincing evidence of effectiveness based on rigorous methodology.

Alphaphonics (Reading) and Astra's Magic Math -- combines systematic, sequenced lessons into a gamelike format, provides abundant practice and repetition of presentation. Friendly visitors from outer space (Astro, in the Alphaphonics reading program, and Astra in the math program) leave a bag of lesson materials daily for the teacher and the children.

Make Every Child Capable of Achieving (MECCA) -- provides daily observation, assessment, and planning for specialized teaching depending on children's needs. Provides additional activities based on a task analysis of the learning activity a child is having trouble with.

Project TALK -- uses structured activities to foster language growth. Language specialist teaches specific expressive and receptive language lessons to the class twice a week; classroom teacher conducts follow-up lessons twice a week.

Multisensory Approach to Reading and Reading Readiness Program (MARC) -- combines activities which emphasize knowledge through the senses with a systematic instructional delivery and management system. Increases readiness skills especially in letter recognition and auditory perception of beginning sounds.

First Level Mathematics -- a diagnostic-prescriptive program that provides a sequential curriculum and management system. Uses concrete objects and physical operations, does not require children to display fine motor and visual skills.

Early Prevention of School Failure -- creates individual profiles for children by screening for fine and gross motor, auditory, visual, and language skills. Provides additional pull-out instruction based on identified weaknesses; provides guides for direct modality instruction in each area.

Effective Elementary School Programs

Karweit's reviews of preschool and kindergarten research note that the effects on the academic performance of at-risk students wash out in elementary school. To maintain the improved performance and continue to increase learning, elementary schools must provide instructional programs that are effective for at-risk students.

This can be done in two ways -- through effective pull-out programs, usually funded by Chapter 1, that concentrate on providing compensatory education services outside the classroom to at-risk students only, or through classroom instructional programs that are effective for all students.

The most cost-effective and efficient way, of course, would be through comprehensive classroom instructional programs that work for all students, including those at risk.

Effective In-Class Elementary Programs

Such elementary school classroom programs have been developed. CREMS researchers Robert Slavin and Nancy Madden review the evidence of effectiveness of in-class programs according to the following criteria:

o Programs had to have well-specified manuals, materials, and training procedures so they could be readily used;

o The evidence for effectiveness had to include effects on standardized reading and/or math scales in studies of at least a semester's duration;

o The program had to be compared to matched or randomized control groups, or report year-to-year gains of at least five normal curve equivalents (NCE's); and

o The program had to show that its evidence of effectiveness applied to students eligible for Chapter 1 services or other at-risk students.

Applying these stringent criteria, Slavin and Madden identify sixteen programs in three categories that show convincing evidence of effectiveness. The three categories are continuous progress programs, individualized instruction programs, and cooperative learning programs.

Effective Continuous Progress Programs

These instructional programs share three common features. One, students proceed through a well-defined hierarchy of skills, are tested at each level for their readiness to move on to the next skill, and receive further instruction on a skill if they are not ready to move on. Two, careful records are kept of each student's progress through the curriculum, with the data used to make grouping, remediation, and other decisions. Three, most instruction is delivered by teachers to groups of students at the same level.

> *"The most cost-effective and efficient way ... would be through comprehensive classroom instructional programs that work for all students, including those at risk."*

The following programs all incorporate the above three features in their instruction, and they provide strong evidence of effectiveness based on comparisons using random or matched control groups. Some distinguishing features of each are noted.

Distar -- provides teachers with specific scripts to use in teaching reading and math and trains teachers in specific methods. Uses direct instruction, rapid pace, high frequency of student responses.

Utah System Approach to Individualized Learning (U-SAIL) -- while the teacher instructs skill-level groups, other students work on independent, exploratory activities.

PEGASUS -- a classic continuous progress program. Organizes the reading program into 17 levels spanning grades K-8.

Exemplary Center for Reading Instruction (ECRI) -- students receive instruction in reading groups, then work on materials at their own rates. Rapid instructional pace, detailed instructions for teachers, frequent assessment of student progress.

Project INSTRUCT -- classic continuous progress. Students grouped according to skill levels; proceed through hierarchy of skills at their own rates.

Goal-Based Educational Management System (GEMS) -- uses placement tests or pretests to place students in appropriate instructional groups; students proceed at their own rates through 200 skill levels covering grades K-12.

Early Childhood Preventative Curriculum (ECPC) -- intended for use with high-risk first graders. An individualized diagnostic-prescriptive program; most instruction given in small, skill-level groups.

Four other continuous progress models are identified by Slavin and Madden in their review. These, however, were evaluated using year-to-year gains on normal curve equivalents -- evidence which is credible, but less convincing than using random or matched control groups. These programs are the Weslaco Individualized Reading and Language Arts Instruction and Staff Development Process (WILASD), Conceptually Oriented Mathematics Curriculum (COMP), Coordinated Learning Integration -- Middlesex Basics (CLIMB), and Outcomes Driven Developmental Model (ODDM).

Effective Programs Offer Convincing Evidence

Any research synthesis that identifies specific projects or programs as effective can expect an immediate reaction. Why these projects and programs? What about Program X, currently being used in classrooms nationwide? What about Program Y, which has been written up in all the education publications?

The fact is, Program X and Program Y may very well be effective programs for students at risk -- but they either haven't been evaluated to prove their effectiveness, or they have been evaluated but the results aren't convincing because the evaluation design was too weak. In short, no one is saying that Program X and Program Y are *not* effective -- but convincing evaluative evidence is needed before before anyone can say that they definitely *are* effective. CREMS researcher Robert Slavin notes in the Slavin/Madden review of in-class programs: "It is ... likely that many programs excluded from this review will prove to be effective or could be modified to be effective."

And even when convincing evidence is available, there's still reason to hedge a little. Slavin cautions: "Even the carefully selected programs emphasized in this review could prove to be ineffective in later research." The reason: the evaluative data proving the effectiveness of the program could come from just one successful site, although the implementation of the program in other sites wasn't as successful.

The purpose of research synthesis is to sum up where we are now -- what we know at the present time. We know from these CREMS syntheses that instructional programs and practices exist that can show convincing evidence of their ability to improve the academic performance of at-risk students in preschool, kindergarten, and elementary schools.

Effective Individualized Instruction Programs

Three features distinguish individualized instruction programs. One, students work primarily on programmed or other individualized self-instructional materials. Two, teachers work mostly with individuals rather than groups of students. Three, as in continuous progress programs, careful records are kept of student progress through a structured, hierarchical set of learning objectives.

Slavin and Madden note that many continuous progress programs describe themselves as "individualized," but they do not use self-instructional materials. Also, the researchers caution that the three individualized programs which they identify as effective have *not* presented evidence of effectiveness specifically with at-risk students. The three programs are:

Matteson Four Dimensional Reading Program -- students proceed at their own rates through individualized learning packets for 40-60% of the total reading period: some small- and large-group activities carried out during rest of period. Thus not a "pure" individualized model.

Andover's Individualized Reading System (AIRS) -- delivers almost all language arts instruction through programmed self-instructional materials. Teachers, aides, and volunteers give one-to-one assistance as needed.

Systematic Teaching and Measuring Mathematics Program (STAMM) -- fully individualized instructional program using self-instructional materials and one-to-one instruction by teachers and aides.

Effective Cooperative Learning Programs

The shared features of effective cooperative learning programs are that students work together on learning activities in structured teams and receive recognition based on the performance of all team members; teachers instruct students who are at the same level in a hierarchy of skills, students are assessed frequently, and corrective procedures are provided for students who do not meet a preset level of mastery.

Slavin and Madden identified two cooperative learning programs that presented convincing evidence of effectiveness for all students, including at-risk students.

Team-Accelerated Instruction (TAI) -- teachers instruct students in skill-level groups on concepts of mathematics; students work in their cooperative teams on self-instructional materials.

Cooperative Integrated Reading and Composition (CIRC) -- uses a combination of mixed-ability, cooperative work groups and skill-based reading groups to teach reading, language arts, and writing in the upper elementary grades. Teachers work with reading groups; students work in their teams on prescribed sets of activities.

Effective Pull-Out Programs for At-Risk Students

Effective pull-out programs, according to many critics, is a contradiction in terms. But the "supplement, not supplant" regulations of Chapter 1 have made pull-out programs the most common method for using Chapter 1 funds to provide services to at-risk students -- a situation that isn't likely to change until the Chapter 1 regulations change.

But Nancy Madden and Robert Slavin note what others have noted previously -- that "the important issue is not the setting in which compensatory services are provided, but the quality of the programs provided in the setting."

Madden and Slavin find thirteen quality programs when they review the evidence of effectiveness of pull-out programs according to the same rigorous criteria used to identify effective in-class programs. Of these, six are tutoring programs, in which tutors work one-on-one with identified at-risk students; six are diagnostic-prescriptive programs, in which at-risk students are carefully assessed and instruction appropriate to their needs is given by a teacher outside the regular classroom; students; and two are computer-assisted instruction programs, in which students work on computers for at least part of their remedial reading or math time.

Among these three groups, the most powerful effects -- the largest effect sizes -- were found for the tutoring programs.

Effective Tutoring Programs

Training for Turnabout Volunteers (TTV) -- uses volunteer junior high school students who take tutoring as an elective class to tutor low achieving first-through-sixth graders in reading and math. Allows underachievers who meet requirements to be tutors. Provides considerable initial and continuing training to tutors

Making Chapter 1 Make a Difference

'How can we bring about a state of affairs in which school districts are choosing from among proven programs, implementing those programs effectively, and producing measurable benefits for their at-risk students?"

Elementary School Program Director Robert Slavin asks this question and then discusses how Chapter 1 regulations, funding, and practices could be changed to accomplish this on a national scale.

(1) Establish a valid list of effective programs for at-risk students. The CREMS research is a first step in this direction, but much remains to be done.

(2) Provide resources to help districts adopt effective practices. For one example, establish state or regional Chapter 1 Effectiveness Centers, staffed by personnel trained in the various effective models and in the dissemination and implementation of successful practices.

(3) Fund research and development of new effective models. Several groups of researchers and developers should be funded to follow a rational sequence of development, pilot-testing, small-scale evaluation, large-scale evaluation by developers, and large-scale evaluation by outside independent evaluators.

(4) Establish independent evaluation centers. These centers would oversee and assist in independent evaluations of programs conducted by state and local evaluation agencies and conduct evaluations of their own. These evaluations would be essential to insure the credibility of program effects.

To fund this sizable, long-term commitment to the creation of effective programs for at-risk students, Slavin notes that Chapter 1 is a $3.9 billion program; that none of this money is allocated to insure that the programs it funds actually pay off in significant improvement of student achievement; and that one penny on the dollar would mean $39 million allocated to research and development of effective Chapter 1 programs.

Reference

Slavin, Robert E. "Making Chapter 1 Make a Difference." *Phi Delta Kappan*, October 1987, pp. 110-119.

involving a structured curriculum.

School Volunteer Development Project -- adult volunteers tutor underachieving students in grades one through six using a variety of materials for a half hour a day, four to five days a week. Tutors receive training in tutoring skills and use of multimedia materials.

Success Controlled Optimal Reading Experience (SCORE) -- uses highly programmed materials and structured tutoring session. Uses rapid drill and practice in list of words grouped to teach specific decoding skills. Tutees are tutored for 15 minutes a day until completion of program, usually four-to-six months.

Programmed Tutorial Reading -- provides one-to-one tutoring by paraprofessionals to first graders in bottom quartile in reading. Uses highly structured tutoring process with programmed materials.

Wallach Tutorial Program -- uses paraprofessionals to tutor children low in readiness skills for half-hour per day on phoneme identification skills. Tutoring focuses on having tutees break up the sounds in words.

Prevention of Learning Disabilities -- screens students for deficits in sensory skills related to reading at kindergarten or beginning first-grade level. Resource teacher tutors students one-to-one or in small groups of two-to-three, three to five times a week.

Diagnostic-Prescriptive Programs

Project Conquest -- provides remedial services to groups of six students. Early in the year, students receive one-to-one tutoring until they acquire word perception skills. Students are carefully assessed by reading clinicians and given individual prescriptions.

Oklahoma City Chapter 1 Program -- assesses student skills and learning styles and gives instruction appropriate to their needs either individually or in small groups. Uses some computer-assisted instruction.

Lincoln, Nebraska Chapter 1 Program -- uses a diagnostic-prescriptive pull-out model with a computer management system that handles diagnostic tests, assigns students to the program, maintains coordination between the regular teacher and the Chapter 1 teacher, monitors student progress, and evaluates student success.

Diagnostic-Prescriptive Arithmetic Program -- uses a math lab approach. Provides individualized and small group activities keyed to problems identified by the Stanford Diagnostic Mathematics Test.

Columbia, MO Chapter 1 Mathematics Program -- emphasizes coordination of instruction between Chapter 1 and regular classroom teachers. These teachers exchange forms indicating objectives that students are working on, and time is set aside for teachers to meet.

Computer-Assisted Instruction

Computer Curriculum Corporation (CCC) Reading and Math Programs -- use a mainframe with terminals linked to a central processing unit by telephone. The computer records student performance levels and progress and provides students with appropriate exercises.

The CCC curriculum itself has been evaluated for effectiveness. In addition, two programs that use the CCC curriculum also present convincing evidence -- the Title I Mathematics Laboratory with Computer Assisted Instruction (math curriculum), and the Merrimack (Massachusetts) Education Center program (reading).

Basic Literacy through Microcomputers -- uses microcomputers or electric typewriters to supplement teacher instruction by having students practice applying phonics skills by typing words, sentences, and stories.

Taking the Risk Out of At-Risk

Karweit's reviews of preschool research found preschool, in general, to have short-term effects on achievement of at-risk children. Karweit also reviewed kindergarten research and identified specific kindergarten programs that presented strong evidence of their effectiveness. Slavin and Madden identified effective in-class elementary programs; Madden and Slavin identified effective elementary pull-out programs.

The findings of these reviews indicate that the instructional programs are available right now for school districts to launch a long-term program that will improve the academic performance of most at-risk students. Begin with preschool, follow-up with effective kindergarten programs, install effective in-class elementary programs, and, if Chapter 1 funding continues to demand pull-out programs, install pull-out programs that show convincing evidence of effectiveness.

In short, provide students who are at risk of school failure with effective instructional programs at every level from preschool through elementary school.

"... the instructional programs are available right now for school districts to launch a long-term program that will improve the academic performance of most at-risk students."

This scenario has the potential to alleviate, for most at-risk students, the initial burden of poor academic performance early in their school careers -- the burden that shows up clearly as a risk factor in later delinquency, dropout, substance abuse, teen pregnancy, continued poor academic performance, unemployment, and other outcomes.

References

Slavin, Robert E. and Nancy A. Madden. "Effective Classroom Programs for Students At Risk." Center for Research on Elementary and Middle Schools, The Johns Hopkins University, Report No. 19, November 1987, 38 pages, $3.50.

Madden, Nancy A. and Robert E. Slavin. "Effective Pull-Out Programs for Students At Risk." Center for Research on Elementary and Middle Schools, The Johns Hopkins University, Report No. 20, November 1987, 24 pages, $2.20.

Karweit, Nancy L. "Effective Kindergarten Programs and Practices for Students At Risk." Center for Research on Elementary and Middle Schools, The Johns Hopkins University, Report No. 21, November 1987, 40 pages, $3.60.

Karweit, Nancy L. "Effective Preschool Programs for Children At Risk." Center for Research on Elementary and Middle Schools, The Johns Hopkins University, Report No. 22, December 1987, 35 pages, $4.00.

POST-TELECONFERENCE ACTIVITIES

The activities in this section are to be completed at the conclusion of the teleconference. You may wish to compare these responses to your responses given in the pre-teleconference activities.

ACTIVITY 1 (Individual)

Post-Teleconference Questions

ACTIVITY 2 (Group)

Segment 2(a) Describing a Low-Achieving Student
Segment 2(b) Considering Alternatives to Ability Grouping

FOLLOW-UP ACTIVITIES

These activities are to take back to your local school/district as a follow-up to the teleconference.

Post-Teleconference Questions

Please take a few moments to answer the following questions. Think about the statements and indicate to what degree you agree or disagree with them. Put an (x) in the space that reflects your answer. The questions are designed to help you reflect on some of the issues of the teleconference. You may wish to compare your pre- and post-teleconference opinions to see how they differ.

	Agree Very strongly	Agree Strongly	Agree	Disagree	Disagree Strongly	Disagree Very Strongly
	()	()	()	()	()	()
1. In American education, all youngsters are taught basically the same things.	()	()	()	()	()	()
2. There are individual differences in the capacity for learning.	()	()	()	()	()	()
3. In American schools, there are different achievement patterns for different groups of students.	()	()	()	()	()	()
4. Low-track students learn small things better than they learn large things.	()	()	()	()	()	()
5. Skills are developed in sequence, from lower-order to higher-order thinking skills.	()	()	()	()	()	()
6. Skills must be mastered before context--i.e., learn the vocabulary before reading a story.	()	()	()	()	()	()
7. Students of varying ablilities learn best in homogeneous groups.	()	()	()	()	()	()
8. Students with lower abilities will be shielded from unfair competition if they are placed in a group consisting only of similar students.	()	()	()	()	()	()
9. Assessment techniques fairly and accurately reflect both ability and achievement.	()	()	()	()	()	()
10. Teachers can teach homogeneous groups more efficiently.	()	()	()	()	()	()
11. Individual learning differences mean we need to have different curricula for different students.	()	()	()	()	()	()
12. Smart students do well in school.	()	()	()	()	()	()
13. Teachers of high-track students expect more of their students than do low-track teachers.	()	()	()	()	()	()

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Reflection Questions

Take a moment to think about the following questions. Feel free to write down your thoughts in the space provided.

IN YOUR SCHOOL:

Describe how your school "ability groups" students.

On what basis are students placed in ability groups?

Why are students grouped for ability?

ACTIVITY 2

Responses to Problem Situations

Please take a few moments to consider your responses to the following situations. You may wish to compare these responses to your responses given in the pre-teleconference activities.

Activity 2(a) Describing a Low-Achieving Student

Think of a low-achieving student in your classroom or school currently experiencing reading failure. Write down five words to describe this individual.

Activity 2(b) Considering Alternatives to Ability Grouping

List and discuss means of meeting the needs of a diverse student body without making one overall assignment to a high-, middle-, or low-ability class. Later, you may wish to compare your list to the strategies discussed in the video segment.

POST-TELECONFERENCE ACTIVITIES

Linda F. Winfield & Richard L. Allington

Activities listed below are designed for participation at the local school-building level. For those participants interested in state-level initiatives to facilitate the academic achievement of low-achieving students, several programs are being implemented: e.g., in Washington state, academic difficulties are treated through a unified system, combining regular, remedial, special, and migrant education; New York has a "congruence" model for state-funded remedial and Chapter 1 programs; and California has a School-Based Coordination Act. A system-wide policy designed to ensure equity in the "intended" and "delivered" curriculum was implemented in the School District of Philadelphia.

Follow-up Activities

1. **Assess shared knowledge of student needs.** Have the principal or designated staff member assess the amount of shared knowledge of the Chapter 1 and regular teacher concerning individual student's needs: for example, how frequently they meet to discuss individual students; whether each is aware of the instruction or curricular materials used in the other's class; and whether they agree or disagree on instructional needs and goals. Refer to the article "The congruence of classroom and remedial reading instruction," in Elementary School Journal, by Johnston, Allington & Afflerbach (1985).

2. **Follow Allington's suggestions.** Obtain the article by Richard Allington published in Learning 87. Follow the five suggestions listed at the end of the article.

3. **Interview students in special programs.** Have the principal, vice-principal or a content-area teacher who is typically not involved with reading/language arts conduct informal interviews with groups of first grade students currently enrolled in supplementary or special programs. The purpose is twofold: 1) to understand from the students' point of view what happens to them during a typical school day and 2) to get a content-area person involved in the reading program. (Don't expect profound statements concerning the fragmentation of instruction from your young students, but be prepared to hear what classrooms they like, which classes they like to get out of, and how much fun they have in the halls on the way). Continue to discuss with the youngsters what they consider reading to be and why. Repeat the process with groups of second graders, third graders, etc. Have the person conducting the interviews share the information at a school staff meeting.

4. **Interview parents of children in special programs.** Repeat the interview process with groups of parents who have children in supplementary or special programs. What is their understanding of curriculum and instruction their children receive? In what specific ways can they assist in facilitating reading/literacy skills at home?

5. **Discuss beliefs about low-achieving students.** Begin a dialogue with members of the school staff concerning the question, "Who in our school is responsible for improving the learning and achievement of low-achieving students?" Use the scenarios and examples provided in the "Teacher belief" article (Winfield, 1986) to identify where the major proportion of beliefs would be categorized.

Have staff plan interdisciplinary projects. At a staff meeting, divide teachers into interdisciplinary groups (e.g. math, first-grade, resource room, art, science). Let each group discuss ways in which the existing curriculum and instruction can be better integrated across subject areas and special programs. The discussion might first identify a short-term interdisciplinary project that students might complete. At book fairs and conventions, identify and review curriculum materials which attempt to pull together two or more content areas (e.g., Spelling in the Content Areas, published by Random House).

Assess curriculum coherence as a team. Provide time for groups of Chapter 1, resource room and classroom teachers at a specific grade level to come together. (We have no idea where we can obtain this precious commodity during the school day.) Have the reading specialist or language arts teacher prepare a list of critical objectives in reading taken from curriculum guides, textbooks, or a particular test. For each objective, provide one or two examples of test items (e.g. curriculum-embedded test items, criterion-referenced test items) that would demonstrate student mastery. Adapt two or three of the questions used in the Winfield (1987) survey to your school setting to obtain teachers' estimates of emphasis and coverage provided to low-achieving students. Use a scale that allows for responses along a continuum of coverage rather than asking for a yes or no response. Group the teachers' estimates into categories of high, low or mixed coverage based on teachers' responses. What do these results tell you about the content that is being covered with these students? For items in each group, how well do students perform? Is it what you might expect based on a coherence model? If not, where are the discrepancies (e.g., if students are performing extremely well on some item which teachers indicated had low coverage, was this concept taught during a prior year?) This activity might be taken at the end of a specified instructional period -- for example, at the end of the school year -- in order to assess curriculum coherence and modify instruction for the next year.

Use subject-matter textbooks for reading instruction. Have the language arts or reading specialist provide reading instruction to low-achieving students using social studies, science, or math textbooks. Chart students' academic progress. Students' classroom participation is also likely to increase in these subject areas.

SUPPLEMENTARY READINGS

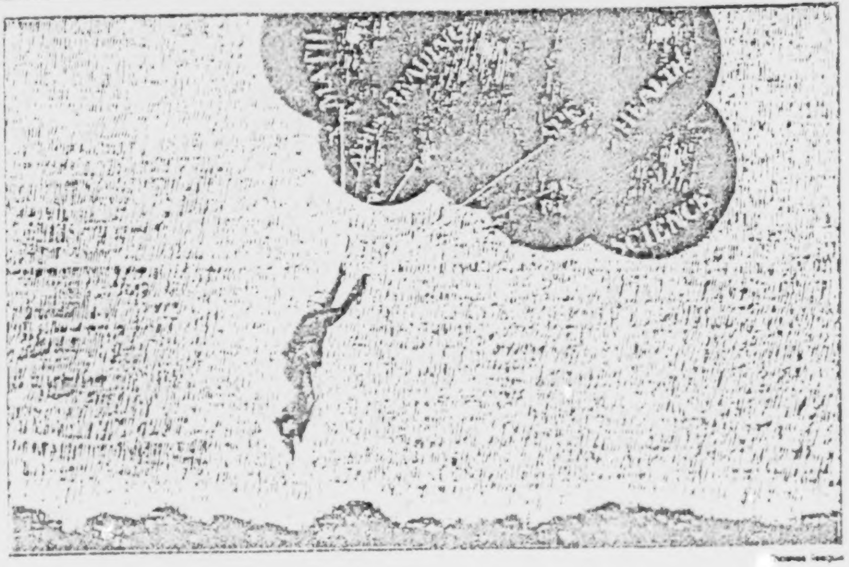
New Chapter 1 Legislation

Special Education Legislation

Assuring School Success for Students at Risk

Children at Risk: The Work of the States

COMMENTARY



Thomas Teague

Revised Chapter 1 Opens Options for Schoolwide Plans

By James H. Lytle

The converging of two recent developments holds unusual promise for the provision of special services in public schools: Congressional approval of a whole-school approach to the delivery of Chapter 1 services and the increasing number of teacher contracts that expand the role of teachers in school-management decisions.

Freed by new regulations to use Chapter 1 funding for schoolwide projects aimed at helping disadvantaged students, schools need no longer rely on more specific—and less effective—remedial programs.

As long as students' eligibility for special services depended on their performing below a given standard—usually defined by scores on reading or mathematics tests—the implication was that it was the child's deficiencies, not the school's services, that needed to be addressed. The whole-school approach allows educators to move beyond this view.

Yet according to the Chapter 1 Technical Assistance Center in Indianapolis, only four or five districts in the country are currently exploiting the new guidelines for schoolwide projects.

With the opening of these avenues, the focus for special services can and should shift to prevention and support—to success—and away from remediation and failure.

Since the passage of the original Elementary and Secondary Education Act in 1965, districts have wrestled with the problems of educating low-achieving, disadvantaged students. In addition to the difficulties of designing and implementing programs that overcome achievement deficits, schools have been constrained by Chapter 1 (formerly Title I) regulations—to supplement, not supplant, regular programs, to serve only eligible students, to use standardized tests to determine eligibility, and to focus on reading and arithmetic.

Especially in schools with high concentrations of eligible students, logistical issues have often overwhelmed the best-intentioned programs.

Recognizing such problems when it reauthorized the E.S.E.A. in 1983, the Congress inserted a provision for schoolwide projects that permitted districts to ignore student-eligibility requirements in those schools where 75 percent or more of the students were from low-income families.

But few districts took advantage of this provision because they were required to pay a matching share for all students in project sites who were not eligible for Chapter 1 services.

In the most recent Chapter 1 reauthorization (effective July 1, 1988), the Congress removed this matching requirement. As a result, districts now have the opportunity to use Chapter 1 funds and staff at schoolwide-project sites with complete flexibility: Chapter 1 professionals can work in regular classrooms; pull-out programs can become team-teaching situations; parent-liaison staff can work with parents of special-education students; all faculty members can participate in Chapter 1 inservice or planning activities, and so on.

And contracts recently negotiated in a number of large, urban districts—including New York City, Miami, Rochester, and Philadelphia—dramatically expand the roles of teachers in school-management decisions. These contracts also suggest changes in the roles of principals—that they become facilitators of faculty involvement rather than directors of improvement efforts. Most important, the new agreements raise the prospect that teachers and principals will collectively develop programs especially appropriate for their students and communities.

The prospective shift in emphasis means that rather than depending on specialists, teachers will have the opportunity to work collaboratively in addressing the educational problems of low-achieving students. In fact, the legislation requires that participating schools present plans "developed with the involvement of those individuals who will be engaged in carrying out the plan."

Authority to conduct a schoolwide project is granted directly by the state educational agency upon approval of the plan. In exchange for flexibility, the legislation requires school-specific accountability and extensive parental involvement.

Indeed, districts are required not simply to involve parents in "the planning, design, and implementation" of programs, but also to work with them in such activities as information meetings, school-to-home assistance, and employment as classroom aides. This section of the legislation appears to reflect the work of Dr. James P. Comer, professor of child psychiatry at Yale University, and others who have built effective programs for disadvantaged students through parent participation.

Schools must also demonstrate improved achievement of "educationally deprived children" within three years of their projects' inception or risk having authorization withdrawn.

The flexibility provided to schoolwide projects using Chapter 1 resources should permit teachers to respond to the needs of other students in addition to the traditional Chapter 1 population. And since services can now be provided to children *before* they have been categorized as remedial or special or limited-English-proficient, program emphasis can shift from deficiency to prevention.

At the Heston School in Philadelphia, for example, a student-services committee now meets before or after school three days a week to review the cases of students referred by teachers or parents. Members of the committee include the principal, support staff, and referring teacher. Through careful planning for each student, the committee has been able to provide a variety of support services and to reduce special-education referrals from 29 in a comparable period last year to 1 this year—while giving the faculty an increased sense of effectiveness in responding to student needs.

The principal reports that the process is much less efficient than when he unilaterally solved the problems. It also requires him to act as a committee member rather than a leader. But he has found the results dramatic and satisfying.

At another Philadelphia elementary school, located next to a large housing project, the principal, parent advisory council, and faculty have developed a simple yet radical approach to dealing with the fact that their students need extra time to master the grade-level curriculum. They have decided to add an extra month to the school year—to teach in 11 months what would normally be covered in 10. In this way, they anticipate that the number of failures and summer-school candidates will be sharply reduced.

In fact, as a result of the new legislation, the number of schoolwide-project sites in the Philadelphia district as a whole has grown from none as recently as 1985 to 11 through June 1988, then to 37 in September 1988—with an anticipated increase to more than 100 sites by 1990-91.

In addition to the opening of schoolwide projects and a strong central-office commitment to school-based experimentation, two factors have been crucial to this development: a change in the process by which the district calculates school eligibility and a broadened needs-assessment section in the Chapter 1 annual application.

Although these shifts could easily be overlooked as merely technical, careful consideration of them will permit not only large, urban districts but even many smaller cities, rural areas, and suburban communities to gain eligibility for some of their schools.

To determine the proportion of low-income families at a school, districts are allowed by federal guidelines to use—either separately or in combination—such indicators as eligibility for the programs of Aid for Families with Dependent Children, free/reduced-price lunch, and food stamps. Given the relatively high income qualification for free/reduced-price lunch eligibility—a family of five with an annual income of $25,179 qualifies—and the fact that A.F.D.C. or food-stamp eligibility automatically qualifies families for free lunch, many schools are likely to meet the 75 percent criterion for schoolwide-project participation if they work aggressively to maximize free/reduced-price lunch participation.

And by taking advantage of the revised guidelines for needs assessment and including in their annual proposals such indicators as incidence of low birth weight, court referrals, and social-studies achievement, districts can justify an expanded array of services drawing on Chapter 1 resources.

In this way, a schoolwide project could legitimately use Chapter 1 funds, for example, to pay for social workers, medical services, and science programs, as long as these services go beyond those already available from the districts' regular budgets.

The new regulations challenge educators and parents in schools across the country to provide more effective schooling for the educationally disadvantaged.

Indeed, the improved flexibility for schoolwide projects creates a put-up or shut-up situation for schools and parent organizations. With the option of using Chapter 1 funds as discretionary resources, school faculties for the first time have substantial, long-term financing available to carry forward their best ideas. Creative responses to this opportunity will make school-site management with significant teacher and parent participation a real possibility. ■

James H. Lytle, executive director of research and evaluation for the School District of Philadelphia, is currently an "executive on loan" and visiting professor at the University of Pennsylvania's graduate school of education.

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EDUCATION DAILY

Special Supplement

Education Programs Reauthorized Through 1993

On April 28, President Reagan signed into law H.R. 5, which reauthorizes most major elementary and secondary education programs through 1993. P.L. 100-297, also called the Hawkins/Stafford Elementary and Secondary School Improvement Amendments (H/S ESSIA), authorizes $8.3 billion for elementary, secondary and adult education programs, most of which will take effect July 1. The following is a title-by-title comparison of the old and new laws.

Hawkins/Stafford ESSIA Title I--Elementary and Secondary Education Act (ESEA) Amendments

ESEA Title I: Basic Programs

Chapter 1 Compensatory Education

Part A–Basic Programs Operated By Local Education Agencies

Old Law	New Law
Declares it national policy to provide financial assistance to state and local education agencies to meet the special needs of educationally deprived children, recognizing that concentrations of low-income students in one district compound their disadvantage.	Declares it national policy that the program shall be expanded so that all eligible disadvantaged students are served by 1993, through annual appropriation increases of $500 million. Basic grants, at $3.8 billion in fiscal 1988, are authorized at such sums as are necessary.
Authorized an amount equal to the 1979 appropriation and half of any increase based on the number of children ages five to 17 in poverty families; children in families receiving Aid To Families With Dependent Children (AFDC) payments above the poverty level for a nonfarm family of four; plus neglected, delinquent and foster children for whose education the local education agency (LEA) is responsible.	Allocates all basic grant funds based on the number of children ages five to 17 living below the poverty level, using the most recent Census Bureau data; the number of children from families receiving AFDC payments above the poverty level for a nonfarm family of four; and the number of neglected, delinquent and foster children for whose education the LEA is responsible. (more)

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Chapter 1 Compensatory Education (Cont.)

Old Law	New Law
Allocated the rest based on the number of children in families with incomes below 50 percent of the median income for a family of four.	
No similar provision.	Provides for a small-state minimum of 0.25 percent when appropriations increase by at least $700 million, or $400 million in concentration grants, over the fiscal 1988 level. No state may receive more than 150 percent of the national per-pupil allocation or more than 150 percent of its previous year's allocation, whichever is less.
Authorized grants to counties with concentrations of poor children, where more than 5,000 students, or 20 percent of the total population ages five to 17, are poor. No state was to receive less than 0.25 percent of the total concentration grant appropriation.	The first $400 million of basic grant funds above a $3.9 billion appropriation is reserved for areas with high concentrations of low-income children. When appropriations reach $4.7 billion, 10 percent is reserved for concentration grants. LEAs are eligible for concentration grants in counties where the number of poor children exceeds 6,500 or 15 percent of total enrollment. Each state is guaranteed a minimum of 0.25 percent of the concentration grant total, or $250,000, whichever is higher. No state will get more than 150 percent of its previous year's allotment.
No similar provision.	LEAs are allowed to set aside up to 5 percent of their grants to pay the costs of innovative projects or make incentive grants to successful Chapter 1 programs.

SCHOOLWIDE PROJECTS

Old Law	New Law
Allowed Chapter 1 services to be provided on a schoolwide basis if 75 percent of children were from low-income families and if a nonfederal source provided supplementary funds.	Adds accountability requirements, such as demonstrated improvement in student achievement and movement toward an effective schools program, and removes the requirement for nonfederal sources. (more)

Chapter 1 Compensatory Education (Cont.)

PARENTAL INVOLVEMENT

Old Law	New Law
Required LEAs to consult the parents of children being served, convene an annual meeting to explain the Chapter 1 program to parents and provide support for parental involvement activities, if requested.	Requires LEAs to have a written policy and to implement procedures for involving parents in the design, operation and evaluation of Chapter 1; informing parents about Chapter 1, training them to help instruct their children, and consulting with them on cooperative home-school activities.

PRIVATE SCHOOL PARTICIPATION

Old Law	New Law
Required that Chapter 1 services be provided to private school students in areas selected for Chapter 1 programs.	Renews current law and authorizes $30 million for fiscal 1988 and $40 million in fiscal 1989 to help LEAs pay for serving private school students.

PROGRAM IMPROVEMENT

Old Law	New Law
No similar provision.	Requires LEAs to develop improvement plans for individual schools with stagnant or declining Chapter 1 performance. Requires state education agencies (SEAs) to develop an education improvement plan in concert with LEAs, with objective measures and assessment standards. Requires SEAs and LEAs to cooperate in taking corrective action when a school's Chapter 1 program shows no improvement.

Part B–Even Start

Old Law	New Law
No similar provision.	Authorizes a new $50 million Even Start grant program to educate poor children and their illiterate parents, beginning in fiscal 1989. When appropriations are less than $50 million, the education secretary may make grants directly to LEAs. When appropriations exceed $50 million, grants will be made to states in proportion to their Chapter 1 basic grants. No state will receive less than $250,000, or 0.5 percent,

(more)

Chapter 1 Compensatory Education (Cont.)

Old Law	New Law
	whichever is greater, and no more than the national per-pupil average allocation. Grant funds may be used to pay 90 percent, 80 percent, 70 percent, and 60 percent of the program's costs in the first, second, third, fourth and subsequent years, respectively.
No similar provision.	Programs must be coordinated with programs under Chapter 1 and Chapter 2, adult education, the Job Training Partnership Act, Head Start, volunteer literacy and other relevant programs. Three percent of Even Start funds must be set aside for migrant programs.

Part C–Basic Skills And Dropout Prevention

Old Law	New Law
No similar provision.	Provides grants to LEAs with high concentrations of low-income or low-achieving students or school dropouts. Funds may be used to improve secondary school students' basic skills and to reduce dropouts. Authorizes grants at $400 million for fiscal 1990, $450 million for fiscal 1991, $500 million for 1992 and $550 million for 1993. As much as 50 percent may be used for dropout programs.

Part D–Programs Operated By State Agencies

MIGRANT CHILDREN

Old Law	New Law
Authorized grants to SEAs for programs to improve the education of children of migrant agriculture workers and fishermen. Based entitlements on the number of migrant children ages five to 17 living in the state full time and part time, based on data from the migrant student record transfer system and other sources.	Generally the same as the old law, but broadens the age range of children counted in the grant formula to three to 21 years. Also makes clear that children of migrant dairy workers are eligible.

(more)

Chapter 1 Compensatory Education (Cont.)

HANDICAPPED CHILDREN

Old Law	New Law
Authorized grants to state agencies for supplemental services designed to meet the special educational needs of handicapped children from birth to age 21.	Provides grants to SEAs, and requires that programs be consistent with requirements of the Education of the Handicapped Act (EHA). Also requires the General Accounting Office to collect information on the types of homes in which participating students live and to study the relationship between state-operated programs for handicapped children under Chapter 1 and parts B and H of EHA.

NEGLECTED AND DELINQUENT CHILDREN

Old Law	New Law
Authorized Chapter 1 grants to state agencies responsible for the education of neglected and delinquent children. No state was to receive less than 85 percent of the previous year's allocation. Authorized an amount equal to 5 percent of the grant for transition services for children being transferred to local education programs.	Retains current law, but deletes the 85 percent "hold-harmless" provision. Requires the state to evaluate the ability of neglected or delinquent students to transfer to special education programs. States may reserve up to 10 percent of grants for transition services to students recently released from state institutions.

Part E–Payments

Old Law	New Law
Authorized SEAs to receive administrative grants of 1 percent of the state's Chapter 1 grant, with a minimum of $225,000, $50,000 for outlying areas.	Provides a minimum $325,000 state administrative grant.
No similar provision.	When total Chapter 1 appropriations equal or exceed $4.8 billion, SEAs may get additional program improvement grants equal to 0.25 percent of the amount given to the state under parts A and D for 1989, 1990 and 1991. The amount rises to 0.50 percent for 1992 and 1993.

(more)

Chapter 1 Compensatory Education (Cont.)

Part F–General Provisions

Old Law	New Law
LEAs could carry over an unlimited amount in Chapter 1 grants for use the following fiscal year.	Limits carryover to 25 percent for fiscal 1989 and 15 percent for 1990 and subsequent years.
No similar provision.	Calls for development of federal regulations for Chapter 1 to be carried in three steps. First, the Education Department must hold a series of regional meetings to identify issues; second, ED will use a modified negotiated rulemaking on some key issues as part of a demonstration project; and third, the normal regulatory review and comment process applies.
No similar provision.	Authorizes $4 million in fiscal 1989, and such sums as are needed for 1990-93 for Chapter 1 evaluation, technical assistance and research.
No similar provision.	Establishes a 12-member National Commission on Migrant Education, with four members appointed by the president, four appointed by the speaker of the House and four appointed by the president pro tempore of the Senate. The panel will study migrant worker demographics and education issues, and will perform a special study of the migrant student record transfer system. Authorized at $2 million
No similar provision.	Authorizes 10 regional rural assistance centers to help states and LEAs improve education for disadvantaged students in Chapter 1 programs who live in rural areas or attend small schools. Authorizes $10 million in fiscal 1989 and such sums thereafter for the centers.
No similar provision.	Requires a national longitudinal study of Chapter 1 students, following them to age 25. A final report is due to Congress in 1997, with an interim report due in 1993. Authorized at $4 million for fiscal 1989, $4.2 million for 1990, $4.4 million for 1991, $4.7 million for 1992 and $5 million for 1993.

(more)

Old Law	New Law
Stated that its purpose was to consolidate more than 40 elementary and secondary school programs into one state grant program, with grants to be used by state and local agencies according to needs and priorities determined by SEAs and LEAs. Administering funds was a state responsibility, but program design and implementation was up to LEAs.	Rewrites the law's purpose to place a greater emphasis on using funds for program improvement, innovation, effective schools and serving at-risk students. States are responsible for administering funds, and LEAs for program design. Allows the education secretary to reserve up to 6 percent of the total appropriation for national programs.
Currently funded at $504 million.	Authorizes block grants at $580 million for fiscal 1989, $610 million for 1990, $640 million for 1991, $672 million for 1992 and $706 million for 1993.

Part A–State And Local Programs

Old Law	New Law
Allotted funds to states in proportion to the number of persons ages five through 17, with no state receiving less than 0.5 percent of the total allotment for states. Reserved 1 percent of funds for outlying areas.	Retains the state allocation provision, but says that not more than 1 percent is reserved for outlying areas, instead of exactly 1 percent.
Required that at least 80 percent of each state grant be allocated to LEAs in proportion to the public and private elementary and secondary school enrollment, adjusted to provide higher per-pupil allocations for LEAs with the greatest numbers or percentages of children whose education imposes a higher-than-average cost per pupil.	Allocations to LEAs similar to existing law, except that private school children will be counted only if they desire to participate in Chapter 2 programs, and the adjustment to enrollment figures is limited to children from low-income families and those in sparsely populated areas.
SEAs and LEAs could use funds for any activities authorized by the more than 40 programs that preceded Chapter 2, including administrative costs.	Restricts SEA funds to administrative activities, technical assistance and grants to LEAs, and effective schools programs. Not more than 25 percent may be used for state administration, and at least 20 percent must be used for effective schools programs.

(more)

TARGETED USE OF FUNDS

Old Law	New Law
No similar provision.	Targets funds to LEAs for the following uses: programs for at-risk students; programs for acquisition and use of instructional materials, such as library books, reference materials and computer equipment; professional development and training programs for teachers, librarians, school counselors and other staff; programs to enhance students' personal excellence; and other innovative programs, including those for gifted and talented children, technology education, early childhood education, community education and youth suicide prevention.

EFFECTIVE SCHOOLS PROGRAMS

Old Law	New Law
No similar provision.	Requires states to use at least 20 percent of their grant funds on effective school programs, defined as those that produce strong and effective administrative and instructional leadership; acquisition of basic and higher-order skills; a safe and orderly school environment; expectations that all students can learn under appropriate conditions; and continuous assessment of students and programs to evaluate the effects of instruction.

Part B–National Programs

Old Law	New Law
Authorized the secretary to make discretionary grants, with funding reserved for the Inexpensive Book Distribution and Arts in Education programs, alcohol and drug abuse education, the Law-Related Education program and the National Diffusion Network. Remaining funds could be used for research, demonstrations, teacher training, implementation assistance and other activities consistent with Chapter 2 goals.	Reauthorizes existing national programs, except drug and alcohol abuse education, and adds a $1.5 million Blue Ribbon Schools program to recognize elementary and secondary schools for excellence and quality.

(more)

Chapter 2–Federal, State And Local Partnerships (Cont.)

Old Law	New Law
Currently funded at $10.2 million for the National Diffusion Network; $7.6 million for Inexpensive Book Distribution; $3.3 million for Arts in Education; and $3.8 million for Law-Related Education.	Also authorizes $11.2 million for the National Diffusion Network, $8.2 million for Inexpensive Book Distribution, $3.5 million for Arts in Education and $1.2 million for Law-Related Education.

Part C–General Administrative Provisions

Old Law	New Law
No similar provision.	Requires LEAs to report annually to the SEA on use of Chapter 2 funds. SEAs are required to evaluate the effectiveness of Chapter 2 programs.
No similar provision.	Requires the secretary to develop a model system that SEAs may use for data collection and reporting, and to submit an annual report to Congress on the use of funds, types of services and students served.

ESEA Title II--Critical Skills Improvement

Part A--Dwight D. Eisenhower Mathematics and Science Education Act

Old Law	New Law
Title II of the Education for Economic Security Act (EESA) authorized assistance to improve instruction in math, science, computer learning and foreign languages.	Rewrites Title II of EESA to focus funds on updating the skills of math and science teachers. It also channels a greater portion of the funds to local school districts.
Authorized at $350 million for fiscal 1988, but Congress appropriated only $119.6 million.	Authorizes grants to states and discretionary grants at $250 million for fiscal 1989 and such sums through 1993.
Allocated 90 percent of the annual appropriation among states on the basis of population ages five to 17. Reserved 9 percent for the secretary's discretionary fund and 1 percent for outlying areas and Indian students.	Requires the secretary to reserve not more than 0.5 percent for U.S. territories, 0.5 percent for programs for Indian students and 4 percent for national programs. The rest would go to states, with half allocated on the basis of the state's school-age population, and half in proportion to the Chapter 1 distribution.

(more)

Critical Skills Improven... (Cont.)

Old Law	New Law
Allocated 70 percent of state funds to elementary and secondary programs, with 70 percent of that distributed to LEAs: half based on public and private elementary and secondary school enrollment and half on the number of low-income children. LEAs used the funds first to improve teacher training in math and science, and if those needs were met, teacher training in computer learning and foreign languages. Of funds reserved by SEAs, at least two-thirds was for demonstration programs, instructional equipment, projects for underrepresented groups and gifted and talented programs and information dissemination. The other third could be used for technical assistance, assessment, administration and evaluation.	Reserves 75 percent of state funds for elementary and secondary schools, and sets aside 90 percent of that for LEAs. Half of the elementary and secondary funds must be distributed to local school districts on the basis of the number of poor children and those from AFDC families. LEAs must use funds to improve teacher training, recruitment and retraining of minority teachers for math and science programs, training in computers and other telecommunications technologies, integrating higher-order analytical skills into math and science curriculum or providing grants to individual teachers to improve their skills or instructional materials.
Targeted 30 percent of state funds to higher education for training teachers to specialize in high school math and science; for retraining high school teachers to teach math, science, foreign languages or computer learning; and for inservice training. Not less than 20 percent of that money was used for cooperative programs among colleges and universities, LEAs, SEAs and other agencies to improve student performance in math, science, computer learning and critical foreign languages.	Essentially the same, although only 25 percent of state funds are reserved for higher education.

Part B--Foreign Languages Assistance

Old Law	New Law
No similar provision.	Establishes a new program to fund model programs of foreign language assistance, with a concentration on those languages in critical need. Authorizes $20 million for fiscal 1989 and such sums through 1993.

(more)

Critical Skills Improvement (Cont.)

Part C–Presidential Awards For Teaching Excellence In Math, Science And Foreign Languages

Old Law	New Law
No similar provision.	Reauthorizes a presidential awards program for outstanding elementary and secondary school teachers of math and science and creates a new awards program for foreign languages teachers. Authorizes $1 million for fiscal 1989 for math and science awards and $1 million for language awards.

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Curriculum Update

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How 'Special' Should the Special Ed Curriculum Be?

Experts Debate Merits of Academics, 'Life Skills'

By John O'Neil

Amidst the mountain of reports on the state of schooling issued by prestigious commissions and task forces during the 1980s, one major component—special education—has received scarcely a word of attention.

Ignored by report writers, the special education field nevertheless is being pushed toward major change. Recent literature ranges from calls for totally abandoning the present system that separates special from general education to assertions that more, not fewer, students might be helped through special education services. In between is a major new proposal for better integration of regular and special education so that many more "mildly handicapped" students can be served in the regular classroom (for a discussion of the "Regular Education Initiative," see pp. 4–5).

Much of the current debate revolves around what constitutes the best education for students labeled as mildly handicapped (learning disabled, educable or mildly mentally retarded, or emotionally or behaviorally disturbed). "There is a serious debate about what should be taught to mildly handicapped students," says Naomi Zigmond, professor of special education in the Department of Instruction and Learning at the University of Pittsburgh. "It's an underexamined question."

This *Curriculum Update* describes the debate over preferred curricular arrangements for mildly disabled students as well as the proposed Regular Education Initiative, a plan to better unify regular and special education that has provoked considerable controversy both within and outside the special education arena.

Photos courtesy of National Education A ciation

"Before we talk about the special education curriculum," however, "we need to look at who's handicapped," advises Marleen Pugach, assistant professor at the University of Wisconsin/Milwaukee. Many experts are concerned about the increase in children labeled as handicapped and the validity of the systems used to classify them.

Numbers Rising

According to the U.S. Department of Education, the number of children receiving special education through federal programs rose from 3.7 million in 1976–77 to 4.4 million in 1986–87, a 19-percent increase (see Figure 1, page 2). The number of children receiving services for learning disabilities, currently the largest category of handicap, increased by more than 140 percent, with some of that gain, experts say, coming as a result of the decreasing number of students identified as mentally retarded.

Many scholars, however, question the accuracy of identification procedures that result in children being referred to special education. Lorrie Shepard of the University of Colorado/Boulder claims that "the reality is that 90 percent of the children served are very mildly 'handicapped.' At least half of the learning disabled population could more accurately be described as slow learners, as children with second-language backgrounds, as children who are naughty in class, as those who are absent often or move from school to school, or as average learners in above-average school districts."

Continued on page 2

Reprinted with permission.

Bob Algozzine of the University of Florida says that while some students have authentic severe learning barriers, the vast majority are just behind in their classes. Other students, whose achievement levels approximate that of those labeled learning disabled, aren't placed in special education because "their behavior isn't annoying enough to the teacher."

As money allocated to reading remediation and other programs has been trimmed, adds Pugach, educators have found that "it's easier to get a kid in special education than anything else."

Dropout Levels High

It is not only the identification and placement of additional children in special education programs that worries some educators. Research on the post-school experiences of handicapped students is not encouraging. More than 30 percent of students enrolled in secondary special education programs drop out, says Eugene Edgar, an education professor at the University of Washington/Seattle, and "neither graduates nor dropouts find adequate employment opportunities." In some school districts, adds Jean Schumaker of the Institute for Research in Learning Disabilities at the University of Kansas, up to three-fourths of learning disabled students may not complete high school.

Zigmond of the University of Pittsburgh says her research shows the dropout rate for learning disabled students is "much higher than for other marginal kids" about 50 percent. She finds this figure surprising because of some of the similarities between special education and dropout prevention programs, such as an emphasis on individualization and frequent contact between students and teachers.

The difficulty that mildly handicapped students often have in keeping up academically with their peers also is daunting. Schumaker says learning disabled students are "typically the bottom-of-the-barrel kids in any school," performing below the 10th percentile in reading, writing, and math. By the time such students reach the 10th grade, their mastery of basic skills may well be only at a 4th grade level.

Further, says Schumaker, learning disabled students have difficulty generalizing skills or content learned in one lesson to facilitate new learning. "There's a huge gap between what [learning disabled students] can do and what they're expected to do," she says.

What Curriculum?

The issue of what type of curriculum will help such students to succeed in special education frequently is a fuzzy area, several experts say. Special education curriculum "is not a strong suit" of the research in the field, says Steve Forness of the Department of Psychiatry at the University of California/Los Angeles. "When we talk about curriculum, we're talking about an IEP [individualized education plan]."

Because of the commitment to the IEP, special educators "don't have the usual constraints of curriculum that most teachers have," says Zigmond. "The domains are up for grabs."

To best meet the needs of mildly disabled students, most educators say schools should offer a wide range of curricular options. Many specialists, however, have distinct preferences in what they see as the proper emphasis in curriculum for mildly disabled students in elementary and secondary schools.

At the elementary level, many special educators feel that mildly disabled students need strong reinforcement in the basic skills as well as a program that teaches students how to behave and get along with peers and the teacher. Except in the very early grades, "you can't get that in the regular classroom," Zigmond asserts.

Herb Rieth, who chairs the Department of Special Education at Vanderbilt University, argues that "the curriculum for regular and special education is largely the same" at the elementary level, except that special educators try to "break down instruction more finely" than regular educators. Randy Schenkat, a consultant working with school districts on special education, advises that schools "just use good, straightforward, direct instruction" in serving mildly handicapped students. "We don't need fancy special education curricula."

A Functional Approach

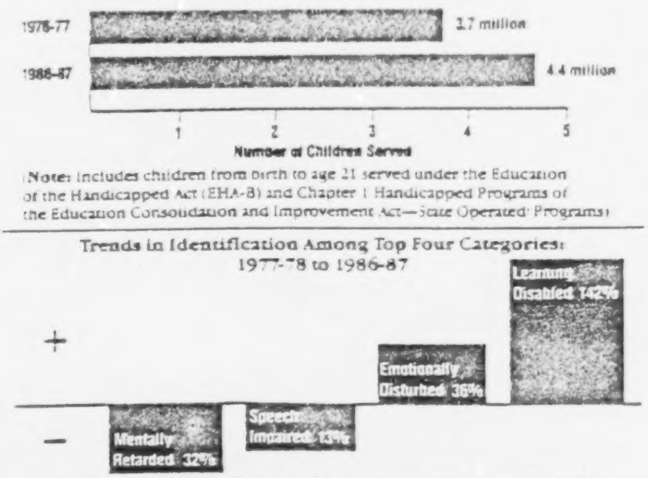
As mildly disabled students enter high school, however, some educators say the academic approach common to secondary education should be tempered with a more "functional" curriculum that will help them after they leave school. "Once they get out of school, that mildly disabled label is gone, and the youngster has to deal with the world of work," notes Rieth.

Schumaker, of the Institute for Research in Learning Disabilities, says the move toward a more content-oriented approach in high school is a difficult transition for many disabled students to make. "When learning disabled students reach the secondary grades, they lack many skills necessary for success in the mainstream curriculum."

To help such students, Zigmond favors an approach that combines academic

Figure 1

Growth in Special Education Services



(**Note:** Includes children from birth to age 21 served under the Education of the Handicapped Act (EHA-B) and Chapter 1 Handicapped Programs of the Education Consolidation and Improvement Act—State Operated Programs)

Trends in Identification Among Top Four Categories: 1977-78 to 1986-87

Source: "Tenth Annual Report to Congress on the Implementation of the Education of the Handicapped Act," U.S. Department of Education, 1988.

The number of children receiving special education services through federal programs has increased nearly 20 percent over the past decade. Leading the way is the huge jump in the number of children identified as being learning disabled.

"I think it's tragic that we're depriving the [mildly disabled] student of standard instruction."
—Stephen Lilly

remediation in basic reading and functional math with lessons in "survival skills or preparation for work. Rieth says vocational training for mildly disabled students must include social skills to get along with other employees and supervisors as well as practice in transferring knowledge gained in one job skill to another.

Edgar of the University of Washington/Seattle says the school reform movement's emphasis on academic requirements "will force special educators to spend even more energy on getting mildly handicapped students through the required academic courses and less time on career and vocational experiences."

"Secondary curricula in special education, especially in the mainstream, are nonfunctional as related to the stated goals of special education," Edgar states. "The only solution is a radical shift in the focus of secondary curriculum away from academics to functional, vocational, independent living tasks."

Melvyn Semmel, director of the special education research lab at the University of California/Santa Barbara, also argues that academic skills are overstressed in programs for mildly handicapped students at the expense of more functional skills. "There is little or no evidence that the curriculum emphasis for mildly handicapped pupils over the past decade has increased the flow of members of this population into higher education or into careers which are clearly dependent on high levels of academic competency. On the contrary, the evidence appears to suggest that mildly handicapped pupils have a higher probability of failure in school and community as a function of the increased academic press in the schools and the growing competition for jobs."

Questions of Balance

Despite frequent calls that schools teach more functional skills to mildly disabled students, "right now in many, many high schools (the curriculum) is still fairly traditional," with academics the primary focus, Rieth says. And there are some who worry that instruction on functional skills will keep students from mastering basic academic competencies.

In an Oregon study of the views that parents, special education administrators, and special education teachers held about the high school curriculum, for example, researchers Andrew Halpern and Michael Benz discovered friction among the groups over curricular emphases. "My son's teachers have been more interested in developing his social skills, pushing him to drive, go to dances, participate in sports, date, etc., rather than working on academics, language arts, reading, and speech, which I feel are more important and more the school's province," one parent of a disabled student wrote in response to a survey question.

In reviewing the survey results, Halpern and Benz concluded that "some very basic issues remain unresolved concerning the desirable focus of a special education curriculum for high school students with mild disabilities."

Daniel Reschly of Iowa State University adds that a "strong rationale" can be made for various curricular approaches, "but determining which is most important for mildly handicapped, low-achieving students, particularly at higher grade levels, is extraordinarily difficult."

Lacking Content

Jane McGlothlin, director of special programs for the Kyrene school district in Tempe, Ariz., worries that some disabled students aren't taught the range of content

Continued on page 6

Research Shows Differences Between Mildly Disabled, Peers

Although many question the various systems that identify students as mildly disabled, Daniel Reschly of Iowa State University says even mildly handicapped students differ from their peers on a wide range of cognitive abilities that have significant implications for curriculum and instruction.

Among the differences cited by researchers:

- Information processing—Research on mildly retarded children has shown that they "differed significantly from average students" in the speed or efficiency of processing information, the knowledge base from previous learning, the use of strategies in acquisition, memory, and problem solving, and metacognitive operations.
- Motivation and attributions—Mildly retarded individuals, research has shown, "have greater tendencies to attribute success or failure to the behavior of other persons or to context variables rather than to individual competence or effort, and . . . they exhibit greater dependence on external reinforcement."

Reschly concludes that, "Despite all the systematic influences and variations in state classification criteria, there is overwhelming evidence establishing the enormous differences between students classified as mildly handicapped and students with average levels of performance on measured intelligence, achievement, and social/emotional behavior."

A solid approach for intervention with mildly disabled students, says Reschly, would include direct instruction, a focus on learning efficacy to facilitate transfer of information into new domains, and some help with adult adjustment.

The 'Regular Ed
Seeking Integration Betwee

Over the past five years, a major proposal to better unify regular and special education has gained prominence among some researchers and practitioners.

The "Regular Education Initiative," as it has come to be known, questions many of the assumptions underlying the education of mildly disabled students in special settings. As a result, it has come under heavy fire from numerous special educators.

"Most of us would opt for systems that foster cooperation and sharing rather than competition and alienation, and that provide appropriate and adaptive programs for all students," Barbara Keogh, a professor at the University of California/Los Angeles, writes in a recent article in the *Journal of Learning Disabilities*. "It is easy to reach consensus on such broadly stated goals. At issue is how to accomplish them."

While most of the issues undergirding the REI are not new, the initiative received its strongest push from a booklet published in the fall of 1986 by Madeleine Will, assistant secretary for special education and rehabilitative services in the U.S. Department of Education.

Educating Students with Learning Problems: A Shared Responsibility, which discussed learning opportunities for educationally disadvantaged students and those with mild learning disabilities or emotional problems, faulted a "fragmented" educational delivery system in which some students "fall through the cracks." Will called for a system "that will bring the program to the child rather than one that brings the child to the program."

The report proposed that more children with learning problems might be served in regular classrooms if instruction were more varied and lengthier, regular and special educators joined forces in "building level support teams," and principals were empowered to control all programs and resources at the school site.

'Pull-Out' Programs

Will has attempted, with limited success, to emphasize that the REI would not mean a lessening [illegible] services to students currently identified as mildly disabled. "Decisions [about a child's placement] should continue to be made on the basis of each child's individual needs," she said in a recent speech. "The goal [of the REI] is to lessen our dependence on 'pull-out' programs. But we do not anticipate that such programs will be eliminated."

But Steve Forness, a professor in the UCLA Department of Psychiatry, cautions that some REI proponents may be underestimating the problems even mild handicaps pose for teachers and children in the regular classroom. The REI is being "interpreted as advocating the elimination of entire categories of mild disabilities." Noting the diminishing number of students labled as mentally retarded in California, Forness says that the students left in that category "are really very impaired. They need more than just a good teacher or curriculum."

Michael Gerber of the University of California/Santa Barbara adds that handicapped students "are very difficult to teach successfully. To achieve a level comparable to their peers, they require much more intensive instruction. This kind of effort is rarely possible in a regular classroom."

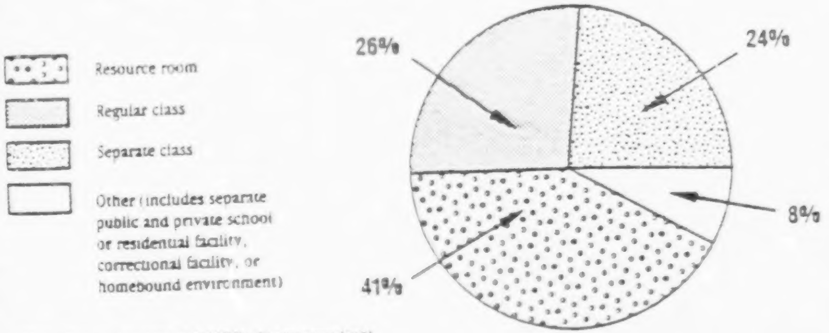
Special educators also have challenged whether regular education teachers are prepared, willing, and qualified to incorporate more students with learning or behavioral difficulties in already-diverse classrooms, given the pressures for academic excellence. "The reform movement is emphasizing more uniformity of students, not tolerating individual differences," advises Naomi Zigmond, professor of special education at the University of Pittsburgh.

Jean Schumaker and Donald Deshler at the Institute for Research in Learning Disabilities at the University of Kansas argue that "the amount of time needed to teach the required number of complex skills [for learning disabled students to succeed in regular classrooms] exceeds the amount of time that might be allocated to such instruction in a secondary content classroom where the teacher is already under pressure to teach more curriculum content as national expectations are raised."

Past Gains Jeopardized

Having battled to win the rights of handicapped children to receive needed educational services, moreover, many special educators feel the REI could result in a drop in attention to—and funding for—disabled children. Mara Sapon-Shevin of the Center for Teaching and Learning at the University of North Dakota points to a report by the conservative Heritage Foundation that says public schools "should not be required to educate those children who cannot, without damaging the main purpose of public education, function in a normal classroom setting." In a recent article in *Exceptional Children*, Sapon-Shevin suggests that Heritage's

Where Students Receive Special Education Services



(Note: Figures do not total 100% due to rounding)

Source: "Tenth Annual Report to Congress on the Implementation of the Education of the Handicapped Act," U.S. Department of Education, 1988.

Most children receive special education services in a resource room setting

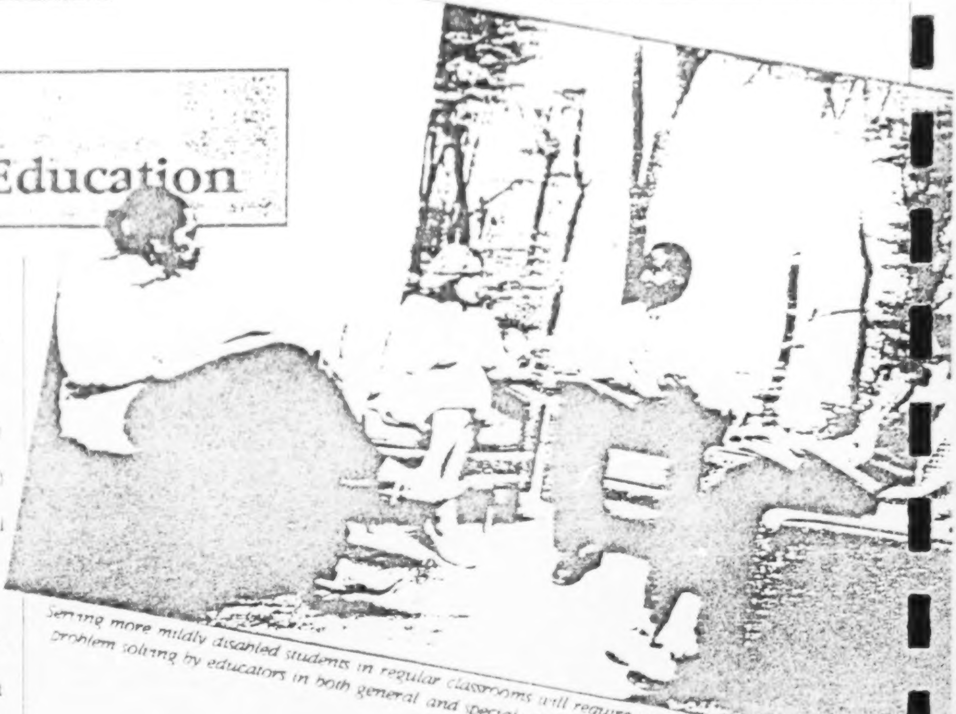
ation Initiative': Special, Regular Education

argument—that efforts to help disabled students should not come at the expense of other pupils—is a more explicit statement of views "presented more subtly in several of the other national reports."

Proponents of the REI, on the other hand, argue that the battle for the civil rights of disabled students was largely won through the passage of the Education for All Handicapped Children Act (P.L. 94–142) in 1975. The legislation, they argue, has created a burdensome and complex special education system in which students are often mislabeled and pulled out of the regular classroom to receive special services of questionable merit.

"One of the strongest arguments for the regular education initiative is that the presumed differences between general and special education, particularly for students labled 'mildly handicapped,' are relatively meaningless, and thus we should remove some of the artificial barriers which have been built between the systems," says Stephen Lilly, dean of the College of Education at Washington State University.

Attempting to deregulate means taking considerable risk, as Principal Levaun Dennett of the Montlake Elementary School in Seattle, Wash., can attest. As part of a restructuring effort at the school begun in 1985, Montlake discontinued the practice of labeling children for special education or remedial services. Quickly, however, the school lost its federal funding for Chapter 1 and special education, and it has since had to make do with a patchwork of one-time grants to continue the project.



Serving more mildly disabled students in regular classrooms will require more collaboration and problem solving by educators in both general and special education, say most experts.

Federal Support

Temple University's Margaret Wang, Maynard Reynolds of the University of Minnesota, and Herbert Walberg of the University of Illinois/Chicago suggest a two-part approach to unifying special and regular education. They call for creating a system that "would combine methods that have a strong research record of effectiveness with comprehensive systems of instruction that have evolved from both general and special education," such as providing students with ample time and instructional support to learn essential content and frequent assessment of progress and feedback.

A second thrust would encourage federal support of states and local districts to experiment with programs to serve disabled students in the regular classroom. The Office of Special Education and Rehabilitative Services in the U.S. Department of Education, under Will's direction, has begun funding a variety of studies to explore aspects of the REI.

A first round of grants awarded in 1985 focused on prereferral strategies to keep students from being placed unnecessarily in pull-out programs. A second round of grants has been awarded to explore effective instructional and classroom management techniques for regular educators to better serve students with learning or behavior problems or those at risk of developing them. Adopted from special education's approach to individualizing instruction, the research projects will experiment with such strategies as changing classroom organization to increase instructional time and changing grouping patterns to enhance learning, Will says.

A third round of grants, expected to be funded this summer, will pull together prereferral and instructional strategies and fashion them into a "comprehensive building-level approach" to educating disabled students.

A Look Ahead

Notwithstanding the criticism leveled at the REI by many special educators, proponents say an educational system that better unifies regular and special education is the wave of the future.

Washington State University's Lilly, for example, says the "regulatory" nature of special education contradicts a staple of the "second wave" of educational reform—that teachers and administrators at the building site should have a greater part in making instructional and other decisions. "One need only examine the regulatory structure of special education to see that it is built on the assumption that no one can be trusted to do what is right unless they are required to do so in very specific terms."

The Holmes Group, an influential consortium of universities attempting to reform teacher preparation, also is being encouraged to consider a teacher education program that fuses regular and special education, says Marleen Pugach of the University of Wisconsin/Milwaukee. Pugach and colleagues in the Holmes Group recently recommended the "substantive and structural reorganization" of a teacher education system that is now "separate and fragmented." They also urged that the Holmes Group's call for "professional development schools," in which teachers would be trained in a "teaching hospital" setting, should reflect a unified approach to teaching all students.

"We've built in a problem by having pull-out programs and a dual system where there's no incentive to have cooperation between regular and special education," Pugach says. Adds Lilly: "I sincerely hope that many current special educators . . . will be willing and eager participants in the redefinition of services we provide to students."

—John O'Neil

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they need. "We sometimes pull students out of social studies and science for so many years for help that they leave school without essential general information about their community and the world around them." McGlothlin says subjects such as science and social studies should be used for "application" of skills learned in other settings to diminish the problem.

Even at the high school level, some experts doubt that the curriculum for mildly disabled students should differ much from a school's regular education curriculum. Noting the current interest in ensuring the functional skills of secondary mildly disabled students, the University of Florida's Algozzine asks, "If those are so important, why aren't all kids learning them?"

"I think it's tragic that we're depriving the (mildly disabled) student of standard instruction," adds Stephen Lilly, dean of education at Washington State University. Life and social skills, he believes, should be taught in regular classrooms and linked with instruction to improve students' higher-order thinking.

> **"We've built in a problem by having pull-out programs and a dual system where there's no incentive to have cooperation between regular and special education."**
>
> **—Marleen Pugach**

In a widely discussed article published in the *Harvard Educational Review* last winter, Alan Gartner and Dorothy Kerzner Lipsky of the City University of New York decried a "disabling" view of handicapped students that "adversely affects expectations regarding their academic achievement. It causes them to be separated from other students; to be exposed to a watered-down curriculum; to be excused from standards and tests routinely applied to other students; to be allowed grades that they have not earned; and, in some states, to be permitted special diplomas."

Separate Classes

Many experts also cite the lack of continuity in mildly disabled students' learning when they are shuttled off to assorted separate programs.

Program Models

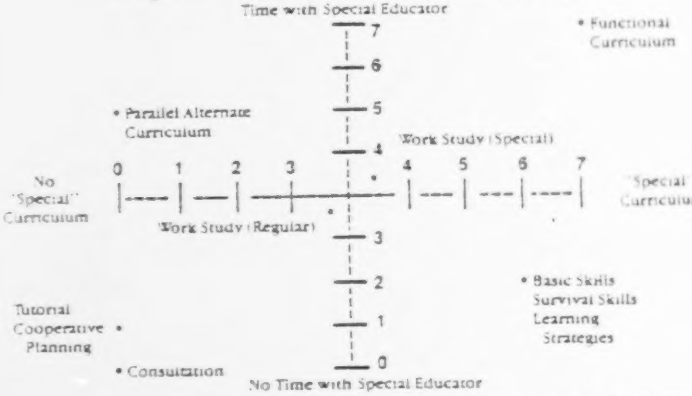
Naomi Zigmond and colleagues at the University of Pittsburgh have created a useful diagram to compare programming options for mildly disabled students in secondary schools. Although it was devised for learning disabled students, Zigmond says the program alternatives are applicable to other mild disabilities as well. The major axes of the diagram plot two variables: the amount of time the student spends with the special educator and the extent to which the curriculum for these students is "special." Both factors are major elements in the current debate over the "Regular Education Initiative," which suggests that more students, when appropriate, be served in regular classrooms.

Zigmond and her colleagues summarize program options as follows:

- Resource Room Model—Novel Curriculum. In this model, students spend one or two class periods per day with a special education teacher and the remainder in the mainstream. The resource room instruction, as opposed to the mainstream, may include **basic skills** remediation, **survival skills** lessons, and instruction on **learning strategies**.
- Resource Room Model—Tutoring. Under this approach, the resource room teacher helps the student master skills and content defined by the mainstream class. The strategy may include both a **tutorial** and **cooperative planning** between the resource room and regular education teacher to develop strategies to help the student succeed.
- Self-Contained Class—Novel Curriculum. This approach includes a **functional curriculum** to teach students skills that will be needed after high school, such as filling out a job application or becoming an informed consumer.
- Self-Contained Class—Standard High School Curriculum. The **parallel alternate curriculum**, one of the strategies used in this model, maintains the same content objectives as the regular classroom but varies the presentation or format—for example, by using film and nonprint materials.
- Consultation Model—With the **consultation** approach, the special educator works with the regular education teacher or as part of a "mainstream instructional team" to adjust instruction to help disabled students in the regular classroom.
- Work Study Model—In this model, students typically spend half of each school day at a job and the other half studying material related to job success. Whether the vocational educator or special educator provides the in-school instruction determines if the program is referred to as **work study (regular)** or **work study (special)**.

Source: *Teaching Learning Disabled Students at the Secondary School Level*, by Naomi Zigmond, Janet Sansone, Sandra Miller, Kathleen Donahoe, and Rachel Kohnke. The handbook is available from the Council for Exceptional Children for $6.50 (or $5.50 for CEC members): CEC, 1920 Association Dr., Reston, VA 22091; 703/620-3660.

Students with Mild Disabilities:
Program Options at the Secondary Level



Source: *Teaching Learning Disabled Students at the Secondary School Level*, Council for Exceptional Children, 1986.

Lilly disagrees with the assumption that a placement outside the regular classroom will provide the disabled student with better and more varied learning opportunities. "Why should we assume that the special placement is the only setting in which they can have increased instructional attention?" Through the use of peer tutoring, cooperative learning, and aides or volunteers in the classroom, mildly disabled students might not need to be taken out of regular education, he says.

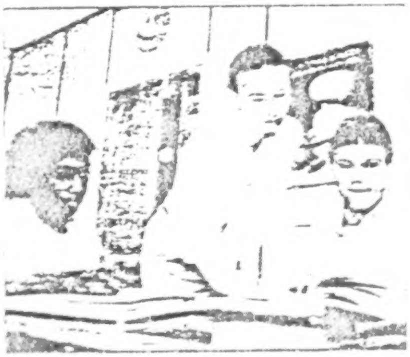
Similarly, McGlothlin worries that a special education placement may not always provide the structured practice needed by disabled students. "It seems to me that in our efforts to provide 'special,' we've often developed a program that was less intense—in terms of instructional time, practice time, and consisting of objectives and materials—for our hard-to-teach students than for our nonhandicapped regular classroom students."

Madeleine Will, assistant secretary for special education and rehabilitative services in the U.S. Department of Education, strongly criticized "pull-out" programs in a report suggesting better integration between regular and special education. Such programs, she wrote in *Educating Students with Learning Problems: A Shared Responsibility*, "minimize communication between special teachers and regular classroom teachers, resulting in a lack of coordination between ongoing classroom instruction and the specially designed remedial instruction. The result is that the remedial instruction does not complement or help the child with the curricula which he or she must master in the regular class."

If a different curriculum is used in special education from that in regular education, "the special education curriculum takes over," cautions Joe Jenkins of the University of Washington, with the result that the general education teacher "doesn't feel any responsibility to teach [mildly disabled] kids to read." Jenkins and colleagues are suggesting in a paper to be published in *Exceptional Children* that special education programs be merged with other compensatory programs such as Chapter 1 to alleviate the "sense of fragmentation" associated with the pull-out model.

Staff Development

Mary Beth Fafard, associate commissioner for special education in the Massachusetts Department of Education, says staff development must be improved to help teachers develop new strategies to aid mildly disabled students in their classrooms. Formerly director of curriculum and professional development for special education in the New York City schools, Fafard says staff development should include showing teachers how to adapt their teaching style and curriculum materials to match the abilities of disabled students.



Regular and special education teachers must join together for staff development focused on curriculum, however, Fafard stresses. "Staff development remains separate in many schools for the regular and special education teachers," she says. Ima Dunn, director of special services for the Pueblo, Colo., schools, adds that although some teachers desire more and better materials accessible to handicapped students, "it's awfully hard to get secondary teachers, especially, to make adaptations."

Besides adapting curriculum, numerous strategies have been suggested to help teachers better serve mildly disabled students in regular classrooms. With the escalating number of students referred to special education, "prereferral" strategies are becoming more popular. Pugach of the University of Wisconsin/Milwaukee says prereferral strategies include "informal, school-based, problem-solving teams," in which a group of teachers discuss how a teacher can help an individual student, and the "consultation" model, in which the special education teacher works directly with the regular classroom teacher to develop an intervention plan for an individual student.

Both models typically involve special educators in an integral fashion. Pugach believes, however, that regular education teachers themselves can develop the skills to avoid inappropriate placement of a student in the special education system. In a recent study of 91 teachers conducted by Pugach, teachers who were trained in peer collaboration learned to "generate a wide variety of successful individual interventions to address identified learning and behavior problems" among students in regular classrooms.

Overcoming the 'Deal'

While such approaches appear promising, building cooperation between regular and special education teachers to help more students succeed in the mainstream curriculum faces large obstacles.

Gartner and Lipsky of the City University of New York note the existence of a "deal" between special and general education. The former asserts a particular body of expertise and a unique understanding of "special" students, thus laying claim to both professional obligation and student benefit. The latter, because of the lack of skills and resources or prejudice, is often happy to hand over "these" students to a welcoming special education system.

And while some educators push the return of more mildly disabled students to the mainstream, others are dubious that regular educators have the skills or willingness to serve them. Noting the number of national reports criticizing general education in the past decade, Barbara Keogh of the University of California/Los Angeles calls it "a strange logic that calls for the regular system to take over the educational responsibility for pupils it has already demonstrated it has failed." Given the strong differences of opinion in the field over what should be taught and in what setting, change that will significantly affect mildly disabled students is likely to take time. ■

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Resources

The following national organizations may be helpful in acquiring materials for disabled students.

American Speech, Language, Hearing Association
10801 Rockville Pike
Rockville, MD 20852
301/897-5700

Association for Children & Adults with Learning Disabilities
4156 Library Road
Pittsburgh, PA 15234
412/341-1515

Association for Education & Rehabilitation of the Blind & Visually Impaired
206 N. Washington Street
Alexandria, VA 22314
703/548-1884

Association for Retarded Citizens
P.O. Box 75005
Arlington, TX 76006
817/640-0204

Council for Exceptional Children (CEC)
1920 Association Drive
Reston, VA 22091
703/620-3660

ERIC Clearinghouse on Handicapped and Gifted Children
1920 Association Drive
Reston, VA 22091
703/620-3660

Clearinghouse on the Handicapped
Office for Handicapped Individuals
Department of Education
330 C Street, SW
Switzer Building, #3132
Washington, DC 20202
202/732-1244

National Association of State Directors of Special Education
2021 K St., NW, Suite 315
Washington, DC 20006
202/296-1800

National Information Center for Handicapped Children & Youth
Park Place Bldg., Suite 1100
7926 Jones Brand Drive
McLean, VA 22102
703/893-6061

Orton Dyslexia Society
724 York Road
Baltimore, MD 21204
301/296-0232

Adapting Materials

When disabled students are mainstreamed in academic subjects such as science and math, educators frequently seek ways to adapt curriculum materials to meet their needs. The Council for Exceptional Children published an "issue brief" on curriculum adaptation that synthesizes information from seven projects sponsored by the U.S. Department of Education's Office for Special Education Programs.

"Adapting Instructional Materials for Mainstreamed Students" describes eight steps to adapting curriculum materials appropriate for the entire ability-integrated class. It also includes descriptions of several creative curriculum adaptation projects using microcomputers, audiocassettes, and other means. For more information about the guide, contact CEC, 1920 Association Dr., Reston, VA 22091, 703/620-3660.

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ASSURING SCHOOL SUCCESS FOR STUDENTS AT RISK

A Council Policy Statement

Adopted November 1987

COUNCIL of
CHIEF STATE SCHOOL OFFICERS

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ASSURING SCHOOL SUCCESS FOR STUDENTS AT RISK

A Council Policy Statement

Adopted November 1987

INTRODUCTION

n imperative for America's 21st Century is high school gradu- for virtually all students.

uring the past several years, the states have undertaken g initiatives to increase expectations and standards for stu- s and to enhance state support for the schools. The states now take the necessary steps to assure these new expecta- are met by *all* students.

m the beginning, this nation has been committed to educa- as fundamental to the success of a free democratic republic. two centuries we have made profound advances in expand- ducational opportunity to assure our form of government ur quality of life. Increasingly, we have realized that our en- opulation must be literate and well-educated for our social, omic and political effectiveness. We have moved toward the tive of a *fully* literate and educated population. But we have ttained it!

r nation is at risk of starting the 21st Century with one of youngsters failing to complete the essentials of learning. was a time in this nation when school failure and little edu- did not foreclose a person's options for a self-sufficient and ng life *nor* impede the nation's capacity in trade, defense, nmental condition, or quality of life. That time is gone. ological advances, demographic changes, international etition, and intense pressures of providing a better life for r numbers of people on a seemingly shrinking planet today e a citizenry educated at least through high school gradua- This is imperative for our nation.

are not meeting that imperative. One of four youth does aduate. The greatest proportions of those who are at risk of aduating are poor, minority, and of limited English profi- We must serve them by taking several actions *now*. The hool class of 2000 entered kindergarten this year. Children classes of 2001, 2002, 2003, and 2004 are already born—one r of them living in poverty. Our society must commit more ces for education of quality. We must strengthen the prac- teaching. We must provide help and incentives for schools nge their programs to succeed with children at risk.

ve all we must make a commitment of *will* to a nationwide high school graduation for virtually all students. This tment of will must be manifest in our states' assurances of education quality for all and states' guarantees of the affirmative practices which are necessary for children at risk to graduate.

PRINCIPLES

The Council of Chief State School Officers (CCSSO) holds these principles:

- In each state there must be an equitable opportunity for each person to earn a high school diploma at public expense.
- Each person, with the rare exceptions of some who have severe disabilities, has the capacity to meet the standards for a high school diploma.
- Recognizing that different individuals learn in different ways, *how* students are successfully taught should vary; *what* each student learns, however, must include a challenging and common curriculum.
- As the nation's chief education officers, our obligation is to provide education programs and to assure other necessary related services so that this nation enters the 21st Century with virtually all students graduating from high school.

REALITY—1987

The stark reality is that we have not yet found the way to succeed with the one-quarter of all students who do not complete high school. Students not graduating or not likely to graduate are *at risk* of lifelong dependence.

We have abundant analysis and evidence that students at risk are often poor, minority, or non-English-speaking. Students at risk frequently lack community and family support. Evidence shows clearly the schools' failure to serve students at risk results from these factors: low expectations for student performance, inadequate resources, uneven quality of teaching staff, absence of close school/home connections, and the inadequacy of school programs.

We believe our students have the capacity to learn and our educational system has the capacity to teach so that the objective for Year 2000 for high school graduation for virtually all students can be attained. To accomplish this objective will require substantial changes in education policy and in school practice now.

STATE ASSURANCES

In the United States, elementary and secondary education is fundamentally a state responsibility. The basic obligation to provide education is lodged at the state level where state law assigns authority to local and state jurisdictions.

Three levels of government—local, state, and federal—share financial support for education. Nationwide and local objectives must be assisted by funding at the federal and local levels. This funding, together with support from the states, must increase to meet obligations to children at risk.

The states must lead the way to provide resources so that *all* schools offer a program of high quality, to strengthen the practice of teaching in *all* schools, to provide help and incentive for *all* schools to increase their effectiveness, and to assure *all* children the guarantee of genuine opportunity for high school graduation backed by affirmative practices for children at risk.

STATE GOVERNMENT ASSURANCE

The laws of each state should provide for an elementary and secondary education program of high quality for all students. State law should provide the supporting health, social welfare, employment, housing, safety, transportation, and other human services which, together with the educational programs, are reasonably calculated to enable all persons to graduate from high school. These supporting services are essential for educational success. Recognizing their special needs, children and youth at risk of failure to graduate from high school should be guaranteed the following:

GUARANTEES

- An education program of the quality available to students who attend schools with high rates of secondary school graduates. The program should be supplemented by education services that are integrated with the regular program and are necessary for the student to make progress toward high school graduation and to graduate.
- Enrollment in a school which demonstrates substantial and sustained student progress which leads at least to graduation from high school.
- Enrollment in a school with an appropriately certified staff which has continuous professional development.
- Enrollment in a school with systematically designed and delivered instruction of demonstrable effectiveness, and with adequate and up-to-date learning technologies and materials of proven value.
- Enrollment in a school with safe and functional facilities.
- A parent and early childhood development program beginning ideally for children by age three, but no later than age four.
- A written guide for teaching and learning for each student, prepared with and approved by the student and parents, which maps the path to high school graduation.
- A program for participation of families as partners in learning at home and at school as their children proceed toward high school graduation.
- Effective supporting health and social services to overcome conditions which put the student at risk of failing to graduate from high school.
- Education information about students, schools, school districts, and the states to enable identification of students at risk and to report on school conditions and performance. The information must be sufficient to let one know whethe the above guarantees are being met and to provide a bas for local and state policies to improve student and schoo performance.

  Procedures by which students and parents or their represen tatives can be assured these guarantees are met.

IMPLEMENTATION

The assurances and guarantees in state education law will likel take different form in the several states. State laws vary in the format, definition, existent substantive provisions, assignment of authority to either state or local jurisdictions, funding provisio or obligations, and implementation dates. The Council advocat that the state government assurances and guarantees present here be authorized by each state through specific statutory provisions appropriate to each state. To assist the states in legislati or regulatory action to implement these assurances and guara tees, the Council has prepared a model state statute. The sta statute provides one means of implementation which a state could use. The precise form of statutory commitment must be in th hands of each state. The commitment to the principles and the im plementation of the assurances and guarantees stated here is th common and essential part of this Council's position.

CONCLUSION

The imperative for beginning America's 21st Century with high school graduation for virtually all students demands unprec dented and bold actions by the states. The states together mu express a *will to succeed*. The expression must become manifest actions to authorize assurances and education guarantee. Other actions must also be taken. A national survey report, "Children A Risk: The Work of the States," prepared by the Council, includ suggested actions which the Council recommends on the basis promising practices in one or more of the states.

To meet the imperative the states and local and federal gover ments must increase resources for education: the practice teaching must be strengthened; schools must be helped to change their programs and improve their effectiveness; parents and communities must be engaged with schools in full partnerships. In a dition to advances within the education system, there must be new harmony of education and related support programs. Ill health, poor housing, inadequate nutrition, unsafe streets—these promote the conditions of risk. They are conditions to be chang together with school improvement. Evoking change is a mul agency responsibility. It requires reaching out from education to other systems and actions by public authorities who are responsible for these combinations of service. A commitment to such ou reach must be made.

The class of 2000 started kindergarten this fall. Think of the eager learning and vigorous play of those children. Who amo them should drop out by 2000? None! But if conditions contin as today, one of four will be lost. One by one, each of those children must be guided during the next thirteen years along the path to graduation. This is imperative for them and for our nation!

The Council of Chief State School Officers (CCSSO) is a nationwide non-profit organization of the 56 public officials who head departments of public education in every state, the District of Columbia, and five extra-state jurisdictions. CCSSO seeks its members' consensus on major education issues and expresses their views to civic and professional organizations, to federal agencies, to Congress, and to the public. Through its structure of standing and special committees, the Council responds to a broad range of concerns about education and provides leadership on major education issues.

Because the Council represents the chief education administrator in each state and territory, it has access to the educational and governmental establishment in each state, and the national influence that accompanies this unique position. CCSSO forms coalitions with many other education organizations and is able to provide leadership for a variety of policy concerns that affect elementary and secondary education. Thus, CCSSO members are able to act cooperatively on matters vital to the education of America's young people.

The Resource Center on Educational Equity provides services designed to achieve equity in education for minorities, women and girls, and for disabled, limited English proficient, and low-income students. The Center is responsible for managing and staffing a variety of CCSSO leadership initiatives to provide better educational services to children and youth at risk to school success.

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CHILDREN AT RISK:
THE WORK OF THE STATES

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PREFACE

The CCSSO Study Commission has devoted 1987 to the study of at-risk children and youth. The Study Commission is the body of deputy chief state school officers. In order to develop an information base for analysis and preparation of recommendations to the Chief State School Officers, the Study Commission developed two surveys to elicit information about how the needs of at-risk students are being defined and met through changes in legislation, regulations or funding; the involvement of state departments of education and school districts with other agencies, organizations or businesses; the factors that are seen as obstacles to effectively serving at-risk students; and the design and operation of successful at-risk programs and practices. The first survey, the State Education Agency (SEA) Questionnaire, collected information from 50 states, the District of Columbia, Guam and the Virgin Islands. The second survey, the At-Risk Student Program Description, was completed by the directors of 59 programs identified by the states and territories as successful in serving the needs of at-risk youth.

This report presents the findings of these surveys. The Introduction describes the nature of the problem, obstacles to meeting the needs of at-risk students, and general strategies for effective programs. The second section presents a set of recommended goals and activities to be pursued by the Chief State School Officers. These recommendations emerged from the deliberations of the Study Commission at its annual meeting in September 1987. The third section summarizes current state activities on behalf of at-risk children and youth. The report concludes with examples of successful programs for at-risk children and youth.

INTRODUCTION

Changing demographics, new state education reform policies, the concerns of business and industry, and increasing national attention on the problem of at-risk youth have sparked an interest at the state level in dealing with the needs of at-risk children and youth. As one survey respondent wrote:

> *The problem demands immediate attention. These children are caught in systems that historically do not respond to their individual needs . . . This population is growing as poor teenagers and minority groups continue to have the highest birth rates and are under the most stress in society.*

The concerns of the state respondents are reflected in the writings of educational demographers and economists. The demographics of our educational system are driven by the changing demographics in the United States. Hodgkinson (1985) reports that one of every three Americans will be non-white by the year 2000. Fifty-nine percent of the children who turn 18 by that year will have lived in a single-parent household. Twenty-two percent of all children lived in poverty in 1983, up from 16 percent in 1979. A child under six is *six times* more likely to be poor than a person over 65. Increasingly, children are giving birth to children, babies who are more likely to be premature, underweight and born with developmental problems.

These trends mean that more children are entering school from poverty households, from single-parent households (rural and urban), from minority backgrounds and with learning disabilities. These are groups of children with whom schools historically have often not succeeded. Levin (1985) estimates that at least 30 percent of today's schoolchildren are educationally disadvantaged. He argues that ignoring the educational needs of these students will lead to a deterioration in the quality of the nation's labor force, a loss of tax revenues from productive workers, rising costs for public assistance, and to the specter of a dual society — one composed primarily of well-educated, prosperous non-minorities and one composed mainly of poorly educated, unemployed or underemployed, low-paid minorities.

The survey respondents wrote that meeting the needs of at-risk children is a formidable task. State and local school districts face a series of economic, structural, attitudinal and other obstacles to effectively serving this population. The primary obstacle is fiscal. The decreasing federal role in education, the poor condition of many state and local economies, and a lack of state legislative commitment and leadership to find resources for at-risk programs make new funds for at-risk student programs difficult to obtain.

Even when federal and state aid is available, the categorical nature of many funding programs for at-risk students limits the flexibility of local school districts in providing a continuum of services to students. In the words of a survey respondent:

> *Often the problem is more pervasive than dealing with the symptoms (low achievement, drug abuse), but the funding source limits the ability to address the underlying problem or to address similar problems.*

The pullout service model used in many categorical programs may also be detrimental to the at-risk student. Unless well-coordinated across all teachers, pullout programs tend to fragment the basic instructional program for students participating in them.

The difficulty of developing alternative education programs and a lack of coordination and cooperation among service providers also serve as major structural barriers to meeting the needs of at-risk students. Some students have trouble adapting to the social structure and academic requirements of a traditional four-year comprehensive high school and find a lack of personal identity and lack of meaningful involvement in this setting. Yet, schools as organizations are not equipped to offer alternative programs or nontraditional services, such as child care and family counseling. State and local rules and procedures, community attitudes about the role of the school in providing non-traditional services and a lack of interagency coordination and collaboration often mitigate against the development of relevant programs or options.

These problems are confounded by negative attitudes about at-risk students themselves, attitudes that include a "blaming the victim" mentality, the perception that not all children can learn and the feeling that school is not the place for a substantial number of children. The unwillingness of local districts to take responsibility for this population and a lack of priority for at-risk learners, particularly at the federal level, are causes for concern, as well.

Another obstacle to the development of programs for at-risk students is the need for better information on the characteristics of effective programs and on the demographic characteristics of the at-risk student population. States desire information on criteria for defining the "at-risk" population; ways to identify, disseminate and fund effective programs; and means of developing program collaboration and coordination. A majority of the states expressed a need for new or additional data on dropouts, special program participants, student and family characteristics, and demographic trends. In addition, they would like better coordination of data collection among state agencies and more uniformity and consistency of definitions and data formats.

The states identified four general elements of effective strategies for meeting the needs of at-risk children and youth: (1) collaboration and coordination; (2) staff and parent involvement in the planning and implementation of programs for at-risk students; (3) emphasis on prevention and early intervention; and (4) opportunities for non-traditional education experiences. Any effective strategy will require a team effort that involves all relevant state agencies, business and industry, communities, schools, and parents. Programs that operate at the building level and involve all of the school's staff and parents in planning and implementation are considered the most likely to succeed. More program emphasis should be placed on prevention and early intervention and these efforts should be generic, rather than focussing on a single risk such as substance abuse. Finally, non-traditional educational arrangements should be encouraged. School structures need to be changed to accommodate the growing diversity of students.

These strategies are reflected in a wide range of state and local activities in support of at-risk children and youth. A sample of these activities are described in the last two sections of this report.

RECOMMENDATIONS

States recognize the the complexity of the at-risk student problem requires multi-faceted solutions, not a "quick fix." States have taken steps to study the problem, to develop mechanisms for coordinated planning, to implement categorical programs and to support local school district initiatives. Policymakers face two major tasks, however, as they continue to address the needs of at-risk students: building a consensus among educators, legislators and community and business leaders for mandating and funding state programs for at-risk youth, and overcoming resistance to change at the state and local levels. Meeting the needs of at-risk students will require time, commitment and considerable resources from federal, state and local governments.

The goal is clear. We believe our students have the capacity to learn and our education system has the capacity to teach so that the objective for Year 2000 for high school graduation for virtually all students can be attained. To accomplish this objective will require substantial changes in education policy and in school practice now.

To this end, the CCSSO Study Commission recommends that the Chief State School Officers pursue the following goals:

- Leadership in the education of the public about the human loss and economic consequences of failing to meet the needs of at-risk children and youth.
- Pursuit of sufficient financial resources to meet the educational needs of at-risk children and youth.
- Elimination of constraints to the provision of appropriate and effective educational services for at-risk children and youth.
- Identification of the characteristics of effective educational programs and practices for at-risk students.
- Establishment of high quality and developmentally appropriate early childhood programs and curricula from preschool through second grade as a minimum.
- Entitlement of each at-risk student to access to a curriculum that is challenging and includes a common core of knowledge for all students.
- Provision of alternative education programs for at-risk youth for whom traditional educational approaches have proven unsuccessful (e.g., smaller classes, extra vocational training, literacy training for youth offenders with rewards for participation of reduced sentences).
- Assurance that students have experiences which lead to employability skills.
- Assurance of an integrated school-initiated, community-home support system for at-risk students.
- Development of curricula and instructional techniques which enhance diverse cultural understanding.
- Promotion of the need for and value of staff who reflect the cultures of all students.
- Improvement of teacher pre-service and in-service training to prepare teachers to work with at-risk students.
- Initiation of data collection systems which enable school officials to identify appropriate program and individual needs.

These goals should be pursued by the Chief State School Officers through the following recommended activities.

1. Undertake a public education campaign about the economic consequences of failure to address the educational challenges of at-risk students. Specially tailor arguments for political leaders.
2. Define at-risk students as those students who are not likely to complete high school successfully.
3. Target for services pregnant teenagers, teenage parents and their children.
4. Work to get teachers to increase their expectations for at-risk students.
5. Avoid stigmatizing and labeling at-risk children and their families.
6. Provide for effective involvement and training for the parents of at-risk students.
7. Promote for each at-risk student the opportunity to attend a school in which adult advocates give continuous oversight and direction to their students' well-being and educational development/progress.
8. Establish early child development programs for three and four year-olds. Provide program options for younger children.
9. Provide support and programs for all students at transitional periods in their educational sequences (e.g., elementary to junior high school, junior high school to senior high school).
10. Provide supplementary instructional programs for at-risk students (e.g., summer school, extended school day).

11. Encourage school-based work programs for at-risk students. Relate jobs to students' academic program.
12. Insure adequate guidance services support for at-risk students.
13. Use programs such as community education programs to play a key role in attracting dropouts back to school.
14. Support scholarship and other incentive programs to increase the pool of culturally diverse teachers.
15. Identify and remove barriers to effective education for at-risk students created by federal and state programmatic and fiscal requirements.
16. Strengthen regular classroom services by altering or eliminating "pull-out" programs (e.g., consider using categorical program teachers in classrooms as resource coaches to assist regular teachers in working with at-risk students).
17. Provide necessary additional resources, particularly for new programs (e.g., early child development), after first considering the most effective use of existing resources to meet the needs of at-risk students.
18. Fund research to identify effective education programs for at-risk students, especially with regard to developing teacher training techniques to meet the diversity of student learning styles.
19. Provide financial and technical assistance support for demonstration projects on promising programs for at-risk students based on research findings (e.g., instructional arrangements, age for school entrance, flexible scheduling, alternative schools or programs).
20. Adjust school finance formulas to provide *additional* funds for districts with high concentrations of at-risk students.
21. Encourage governors to establish cabinet-level interagency cooperative agreements among agencies providing services to at-risk students and their families. Similar interagency cooperative agreements should be established at the local level and include private, non-profit agency service providers.
22. Establish school-based collaborative arrangements with neighborhood health and social service providers.
23. Establish partnerships with business and industry to provide effective school-to-work transitions for at-risk students.
24. Monitor programs for at-risk students regularly and provide full reports to the public, especially about unanticipated results (e.g., initial decline in achievement test scores because of increased retention of at-risk students).
25. Provide education information about students, schools, school districts, and the states to enable identification of students at risk and to report on school conditions and performance. The information must be sufficient to let one know whether program goals are being met and to provide a basis for local and state policies to improve student and school performance.